

Optimized Framework for Online Admission Systems With Reference To Professional Programmes in Maharashtra

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Abstract: As Admission system is a process, researchers are going to concentrate on standardization, evaluation and optimization. This research paper presents optimized framework for Online Admission process. Framework is derived from study of processes followed for Online Admissions by IITs (Indian Institute of Technology) in India, MIT (Massachusetts Institute of Technology, USA) and 46 eminent organizations' conducting various Professional Programmes(8) like Engineering and Technology, Management (MBA and MCA), Health Sciences, Agriculture, Pharmacy, Education, Law Programmes in Maharashtra. Framework is presented in UML which is universally accepted for modeling and design of a system.

Keywords: Online Admission System (OAS), Professional Programmes, framework, optimization.

I. Introduction

Admission of students into University is a most important activity in every educational system which is as old as education itself. Student admissions are a vital part of any University's / Institution's running because students keep a University/Institution alive and they cannot survive without students. As more and more students are enrolling in different Universities / Institutions, for different programmes.[1] It is becoming difficult to handle such a large volume of student's admission using offline admission system. So Colleges and Universities have begun to rely on Web technology for admissions. Use of Online Admission System is one of them [2].

Need of Study:

Online Admission System is defined as a service available and performed using the Internet where computer & other devices are connected with network to perform Admissions. 87.8 % professional programmes are using Online Admission System in Maharashtra and only 12.2 % programmes are professional but not using Online Admission System. [26] So researchers decided to study this topic in detail. As Admission system is a process, researchers are going to concentrate on standardization, evaluation and optimization.

Standardization: As IITs and MIT (Massachusetts Institute of Technology, USA) are considered as best institutes offering professional programmes, researchers followed their Online Admission process as a standard. After deep study of processes, MIT's admission process and processes followed in India has a significant difference due to difference between policies used by different countries for admissions to Professional Programmes . So finally IIT's process is taken as benchmark.

Evaluation: For evaluation whole population of all Organizations who conducts Admissions for 8 Professional Programmes except Law like Engineering and Technology, Management (MBA and MCA), Health Sciences, Agriculture, Pharmacy, Education, Law under State and Deemed Universities in Maharashtra are considered for study by researchers as listed in **TABLE I** below

Table I

Sr.No. of Prof. Programme k	Name Of Professional Programme	Number of Different Organisations conducting Admissions
1	Engineering and Technology	11
2	Management (MBA)	7
3	Management (MCA)	3
4	Agriculture	1
5	Pharmacy	4
6	Health Sciences	11
7	Education	4
8	Law	5
	Total	46

Processes of admission to above 46 Organizations's Professional Programmes are studied by researchers. Phases in Admission Process are identified. Statistical Analysis is carried out and it is proved that there is positive impact of technology in all phases of Admission Process. [24]

Optimization: To carry out further evaluation for finding optimization (time minimization and cost minimization) for above mentioned processes researchers framed following objectives.

Objectives Of Research Paper

1. To study processes used by 8 Professional Programmes (Engineering and Technology , Management Health Sciences, Pharmacy, Agriculture, Education and Law Programmes) conducted by different organizations.
2. To prepare a generic process diagram for each Professional Programme mentioned above.
3. To design and propose a framework, which can optimize the processes used till date in the existing setup.

II. Research Methodology

Survey of websites, prospectus of all above mentioned organizations, personal visits, interviews of stakeholders are used for research.

Scope of Study: From articles published by UGC (University Grant Commission) researchers found that there are 15 statutory professional councils, which are responsible for Professional Programmes's for setting and maintaining standards in the respective areas of higher education. [25]. So 14 professional programmes researchers considered for study are as follows

1. Engineering and Technology Programmes
2. Management Programmes (MBA and MCA)
3. Medicine Programmes
4. Dental Programmes
5. Ayurveda Programmes
6. Homeopathy Programmes
7. Unani Programmes
8. Nursing Programmes
9. Pharmacy Programmes
10. Education Programmes
11. Law Programmes
12. Animal and Fishery Sciences Programmes
13. Agriculture Programmes
14. Science Professional Programmes

Considering Bachelor's degree programmes , For Programmes 3 to 8 and 12

- 3 Medicine Programmes (MBBS)
- 4 Dental Programmes (BDS)
- 5 Ayurveda Programmes (BAMS)
- 6 Homeopathy Programmes (BHMS)
- 7 Unani Programmes (BUMS)
- 8 Nursing Programmes (B.Sc. Nursing)
- 12 Animal and Fishery Sciences (Bachelor Of Veterinary Science And Animal Husbandry (B.V.Sc& A.H.)) (Total 7) more than 1 lakh students apply every year whose Admission is through CAP and authority is DMER. And so researcher is going to study these programme's process as one, under Programme Health Sciences. (7 Programmes to 1). Law and Science Professional Programmes' admissions are done by each individual Institution as their own; there is no centralized admission so researcher will consider only law programmes. So Eight (8) Professional programmes under the study are as follows

1. Engineering and Technology Programmes
2. Management Programme MBA
3. Management Programme MCA
4. Health Sciences Programmes (Medicine , Dental , Ayurveda, Homeopathy, Unani, Nursing, Animal and Fishery Sciences)
5. Pharmacy Programmes
6. Education Programmes
7. Agriculture Programmes
8. Law Programmes.

Different steps used in Online Admission System for above mentioned 46 Organizations's Professional Programmes and IIT are identified from their process diagrams. For each Professional programme mentioned above generic diagram is drawn which combines all steps used in online Admissions. A Careful study reveals that many steps are common. Data mining technique is applied for steps used in Admission Processes using R data analysis software and its apriori algorithm in arules package which mine frequent steps in processes (using level-wise search for frequent itemsets) to find association rules.[28,29] Parameters

specified are confidence = 0.8, support = 0.53, target frequent. Twelve (12) frequently occurring steps are found by researchers are listed in **TABLE II** below

Table II

Sr.No.	Stepname	Description
1	S1	All Information of admission is given to student through website
2	S2	Candidate applies online through dynamic website for Entrance Exam or Admissions
3	S4	Apply for online for entrance Exam
4	S9	Gets Help to fill Online form in the form of audio-Video or Screenshots of the Form or Textual information
5	S13	Gets username and password
6	S15	Pay Entrance Exam Fees / Admission Registration Fees
7	S20	Fills Online Application Form For Entrance like Personal Information (Name, Email) , Contact Details , Educational Information
8	S21	Uploads Photograph , signature and thumb impression
9	S22	Selects Exam's city , date and schedule online if flexible date and time are provided
10	S25	Receipt of Admit card / Hall Ticket
11	S30	Conduction of Entrance Exam
12	S35	Display of result or Merit List on website

Further evaluation of processes finds that Admission process can be classified under main 5 processes as Admission Process 1, Admission Process 2, Admission Process 3, Admission Process 4 and Admission Process 5 which is used by above mentioned organizations for carrying out Online Admissions.

1 In Admission process1 along with Entrance Exam Result / Merit list Counseling schedule is also displayed And Admissions are offered according to counseling schedule. This process is followed by 26 organizations.

2 In Admission process 2 organizations display Result and Provisional Merit List and Grievances in Merit List are considered and then final Merit List and Counseling schedule is displayed. According to counseling schedule admissions are offered. This process is followed by 3 organizations.

3 In Admission Process 3 organizations display Result and Short List of selected candidates for GD (Group Discussion) and or PI (Personal Interview) and or WAT (Writing Ability Test). After GD /PI / WAT again selected candidates List is displayed on website along with counseling schedule and then admissions are offered. This process is followed by 9 organizations.

4 In Admission Process 4, two distinct organizations are involved in admission process.

1 One organization conducts entrance Exam for respective professional programme and display Result, considers grievances if any. Issues Score Card for Entrance Exam.

2 Other organization responsible for admission process who conducts CAP (Centralized Admission Process) and with the help of score cards candidate applies online for CAP. That organization again displays Provisional and Final Merit lists considering grievances if any. ARC (Application Receipt Centers) play important role of verifying student's documents in this process. Then Applicant fills option form according to displayed seats availability on website. and according to merit admission process is carried out for specific number of rounds. This process is followed by 9 organizations.

5 In Admission Process 5 organizations display Result and Preference Form Filling Process schedule according to Merit List. Preference form filling process is carried out offline at regional centers in person. Then Allocation of seats is displayed on website and then candidate has to confirm the admissions according to allocation displayed. This process is followed by 1 organization.

As System is large we have decomposed it into different figures and tried to present it. The UML's Component Diagram is drawn using (ARGO UML Tool) showing a generic process diagram for each Professional Programme and details of components will be presented in Activity Diagrams in later part of paper.[30,31]

Now we will consider one by one Professional Programme and show each organization's admission process falls in which category

- 1) **Engineering And Technology Programmes:** Researchers have studies 11 organization's Online Admission Processes for Engineering and Technology Programmes. After careful examination of steps observations shows that all 11 processes can be categorized into 3 Admission Processes as Admission Process 1, Admission Process 3 and Admission Process 4 as in **TABLE III** below.

Table III

Sr.No.	Organizations conducting Engineering Technology Programmes's Admissions	Admission Process1	Admission Process3	Admission Process4
1	DTE (Directorate of Technical Education) for all State Universities [3]			1
2	BVDU (Bharati Vidyapeeth Deemed University) [5]	1		
3	DrDYPTLVPP (Dr. D.Y. Patil Vidyapeeth Pimpri Pune) [7]	1		
4	HBNI (Homi Bhabha National Institute, Mumbai) [13]		1	
5	ICTECHM (Institute of Chemical Technology , Mumbai) [9]			1
6	DAIT / IARMTECHP (Defence Institute of Advanced Technology /Institute of Armament Technology, Pune) [10]	1		
7	NMISM (Narsee Monjee Institute of Management Studies Mumbai) [8]	1		

8	PDrDYPTLVNM (Padmashree Dr.D.Y. Patil Vidyapeeth Navi Mumbai) [6]	1		
9	SIU (Symbiosis International University, Pune) [4]		1	
10	TIFRDUM (Tata Institute of Fundamental Research Deemed University, Mumbai) [11]		1	
11	TMVP (Tilak Maharashtra University , Pune) [12]	1		
Total		6	3	2

A generic process diagram for Engineering and Technology Programmes is as shown in Figure 1.

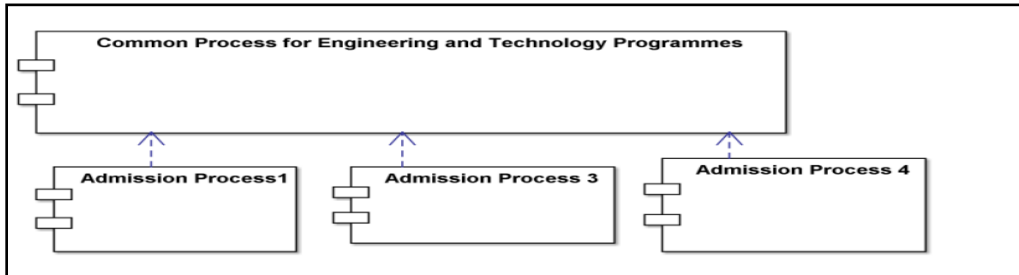


Figure 1 A generic process diagram for Engineering and Technology Programmes

- 2) **Management Programme MBA:** Researchers have studied 7 organization’s Online Admission Processes for MBA Programme. After careful examination of steps observations shows that all 7 processes can be categorized into 3 Admission Processes as Admission Process 1, Admission Process 3 and Admission Process 4 in **TABLE IV** below.

Table IV

Sr.No.	Organizations conducting MBA Programme’s Admissions	Admission Process1	Admission Process3	Admission Process4
1	DTE (Directorate of Technical Education) for all State Universities			1
2	BVDU (Bharati Vidyapeeth Deemed University)	1		
3	DrDYPTLVPP (Dr. D.Y. Patil Vidyapeeth Pimpri Pune)		1	
4	NMISM (Narsee Monjee Institute of Management Studies Mumbai)		1	
5	PDrDYPTLVNM (Padmashree Dr.D.Y. Patil Vidyapeeth Navi Mumbai)		1	
6	SIU (Symbiosis International University, Pune)		1	
7	TMVP (Tilak Maharashtra University , Pune)	1		
Total		2	4	1

A generic process diagram for Management MBA Programme is as shown in Figure 2.

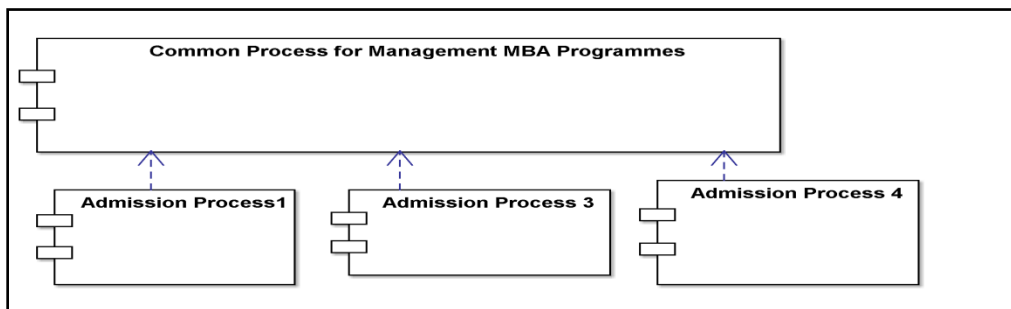


Figure 2 A generic process diagram for Management MBA Programme

- 3) **Management Programme MCA:** Researchers have studied organization’s Online Admission Processes for MCA Programme. After careful examination of steps observations shows that all 3 processes can be categorized into 2 Admission Processes as Admission Process1 and Admission Process 4 in **TABLE V** below.

Table V

Sr.No.	Organizations conducting MCA Programme’s Admissions	Admission Process1	Admission Process4
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1	DTE (Directorate of Technical Education) for all State Universities		1
2	BVDU (Bharati Vidyapeeth Deemed University)	1	
3	TMVP (Tilak Maharashtra University , Pune)	1	
	Total	2	1

A generic process diagram for Management MCA Programme is as shown in Figure 3.

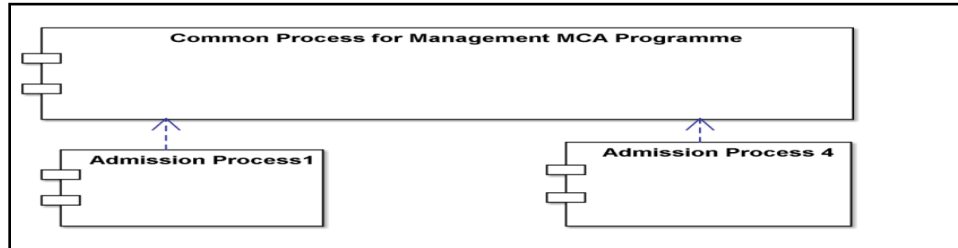


Figure 3 A generic process diagram for Management MCA Programme

4) **Pharmacy Programmes** : Researchers have studied 4 organization’s Online Admission Processes for Pharmacy Programme. After careful examination of steps observations shows that all 4 processes can be categorized into 2 Admission Processes as Admission Process1 and Admission Process 4 in TABLE VI below.

Table VI

Sr.No.	Organizations conducting Pharmacy Programme’s Admissions	Admission Process1	Admission Process4
1	DTE (Directorate of Technical Education) for all State Universities		1
2	BVDU (Bharati Vidyapeeth Deemed University)	1	
3	NMIMS (Narsee Monjee Institute of Management Studies Mumbai)	1	
4	ICTECHM (Institute of Chemical Technology , Mumbai)		1
	Total	2	2

A

generic process diagram for Pharmacy Programme is as shown in Figure 4.

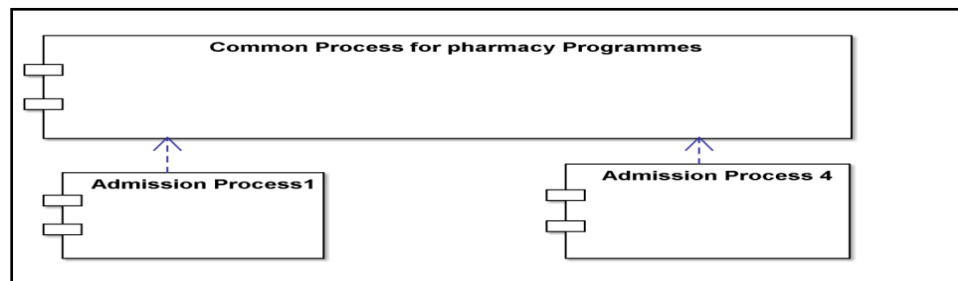


Figure 4 A generic process diagram for Pharmacy Programmes

5) **Health Sciences Programmes (Medicine , Dental , Ayurveda, Homeopathy, Unani, Nursing, Animal and Fishery Sciences)** : Researchers have studied 11 organization’s Online Admission Processes for Health Sciences Programme. After careful examination of steps observations shows that all 11 processes can be categorized into 4 Admission Processes as Admission Process 1 ,Admission Process 2, Admission Process 3 and Admission Process 5 in TABLE VII below.

TABLE VII

Sr.No.	Organizations conducting Health Sciences Programme’s Admissions	Admission Process1	Admission Process2	Admission Process3	Admission Process5
1	DMER (Directorate of Medical Education) [14]				1
2	BVDU (Bharati Vidyapeeth Deemed University)	1			
3	DrDYPTLVPP (Dr. D.Y. Patil Vidyapeeth Pimpri Pune)	1			
4	PDrDYPTLVNM (Padmashree Dr.D.Y. Patil Vidyapeeth Navi Mumbai)	1			
5	DYPTLESK (D.Y Patil Educational Society Kolhapur) [15]	1			
6	PIMSDUL (Pravara Institute of Medical Sciences, Deemed University Loni) [16]	1			
7	KIMSCDUK (Krishna Institute of Medical Sciences Deemed University Karad) [18]		1		

8	MGMHSCDUNM (MGM Institute of Health Sciences Navimumbai) [19]		1		
9	DMIMSDU(DattaMeghe Institute Of Medical Sciences Deemed University) [17]	1			
10	SIU (Symbiosis International University, Pune)			1	
11	TMVP (Tilak Maharashtra University , Pune)	1			
	Total	7	2	1	1

A generic process diagram for Health Sciences Programmes is as shown in Figure 5.

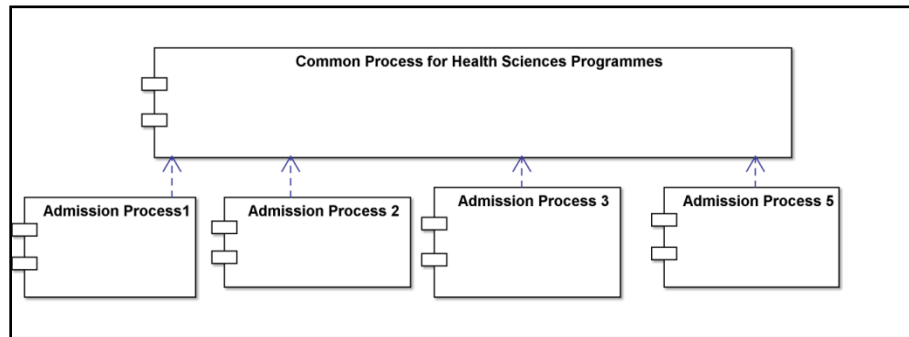


Figure 5 A generic process diagram for Health Sciences Programmes

- 6) **Law Programmes:** Researchers have studied 4 organization’s Online Admission Processes for Pharmacy Programme. After careful examination of steps observations shows that all 4 processes can be categorized into 2 Admission Processes as Admission Process 1, Admission Process 2 and Admission Process 3 in TABLE VIII below.

TABLE VIII

Sr.No.	Organizations conducting Law Programme’s Admissions	Admission Process1	Admission Process2	Admission Process3
1	ILS Law College Pune [22]		2	
2	BVDU (Bharati Vidyapeeth Deemed University)	1		
3	NMISM (Narsee Monjee Institute of Management Studies Mumbai)	1		
4	SIU (Symbiosis International University, Pune)	1		
5	TMVP (Tilak Maharashtra University , Pune)	1		
	Total	7	2	1

A generic process diagram for Law is as shown in Figure 6.

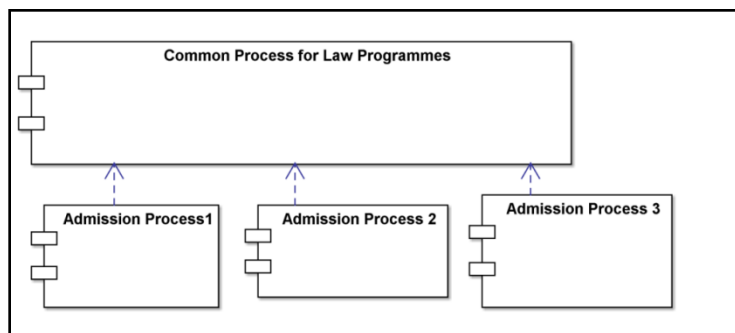


Figure 6 A generic process diagram for Law Programmes

After presenting generic process diagram for carrying out Online Admissions for above 6 professional Programmes researchers have drafted UML’s Activity Diagram using (ARGO UML Tool) shows common steps in all processes in Figure 7. Figures 8, 9, 10, 11 show UML’s Activity Diagrams showing Admission Process 1 and Admission Process 3, Admission Process 2, Admission Process 4 and Admission Process 5 respectively.

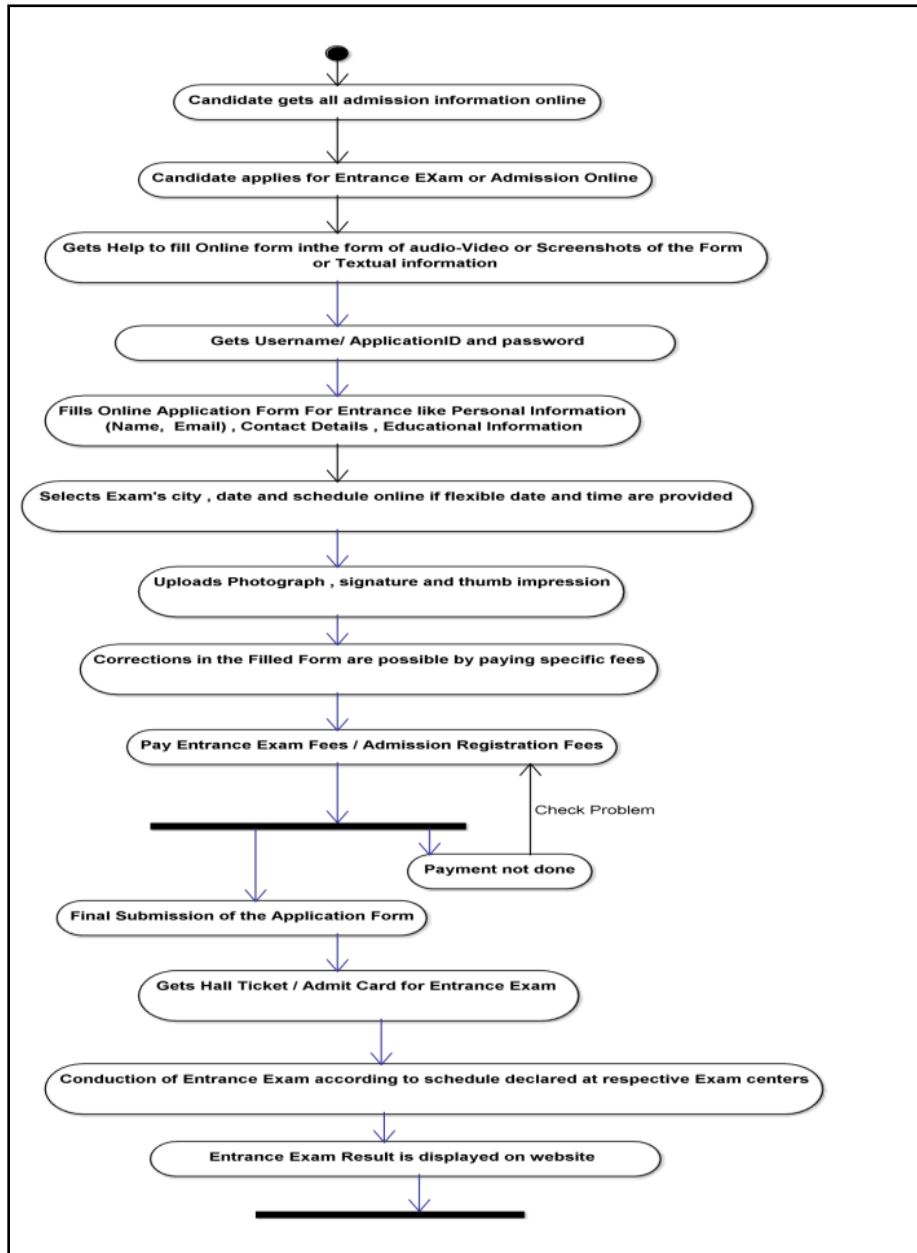


Figure 7 showing common steps in all processes for above 6 Professional Programmes

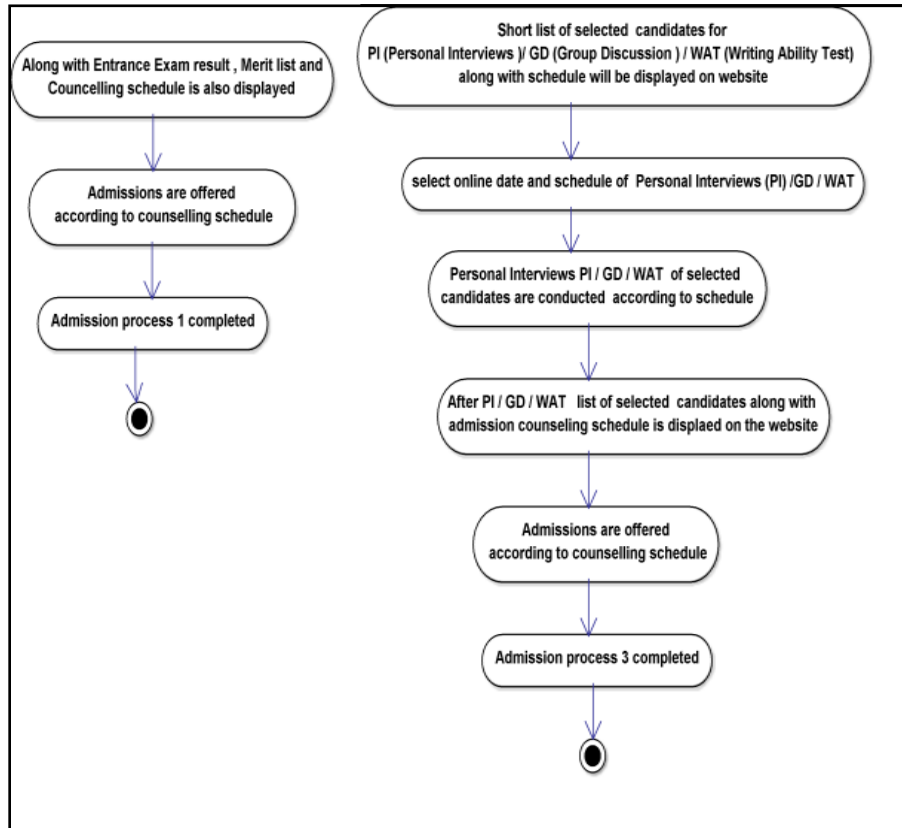


Figure 8 showing Admission Process 1 and Admission Process 3 in Component 2 and Component 4

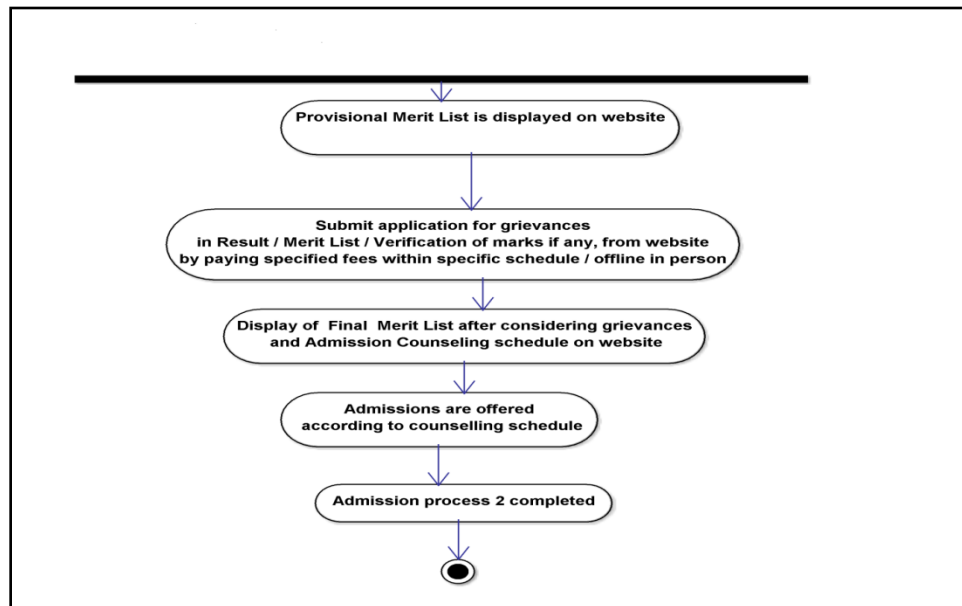


Figure 9 showing Admission Process 2 in Component 3

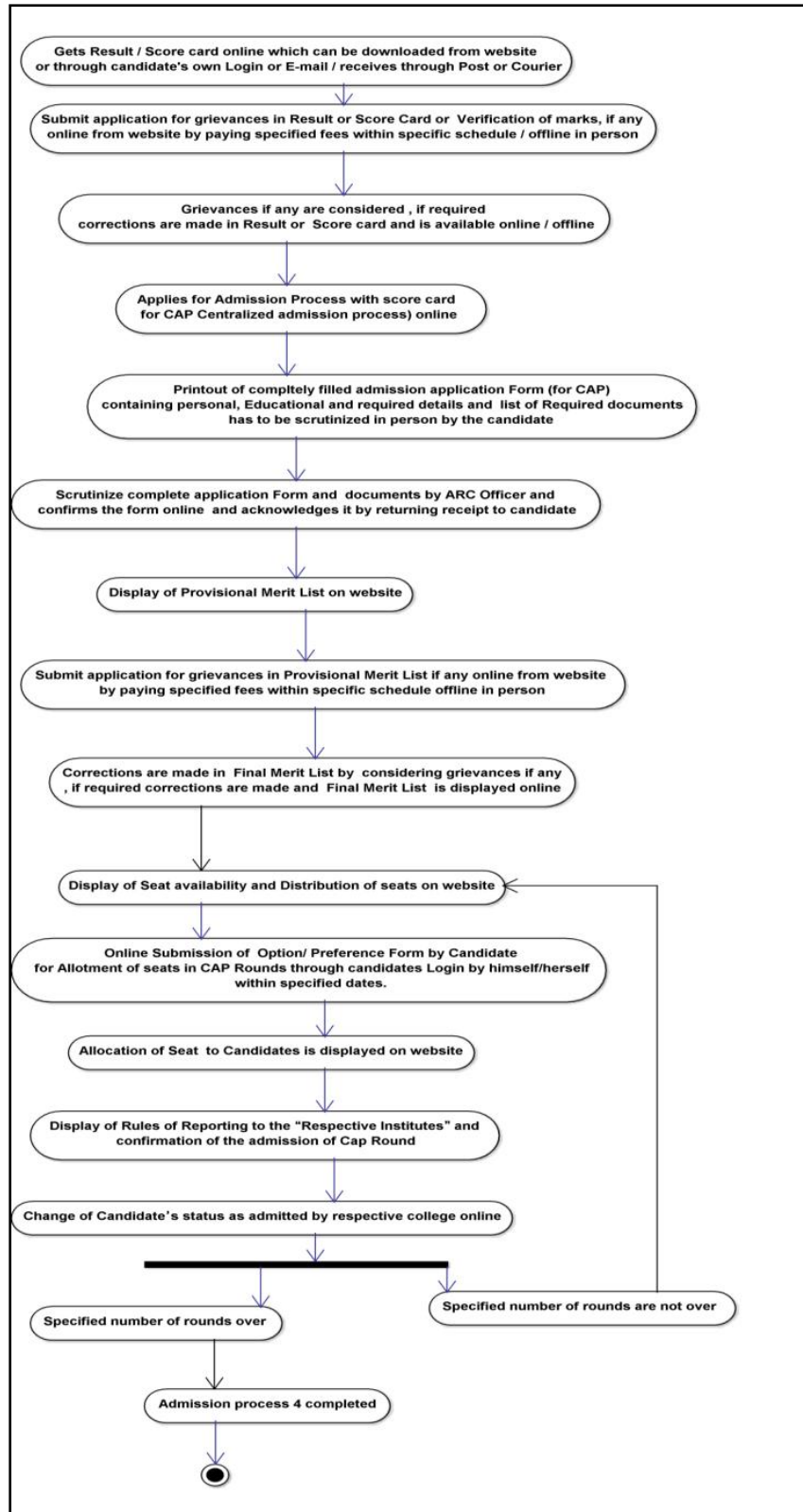


Figure 10 showing Admission Process 4 in Component 5

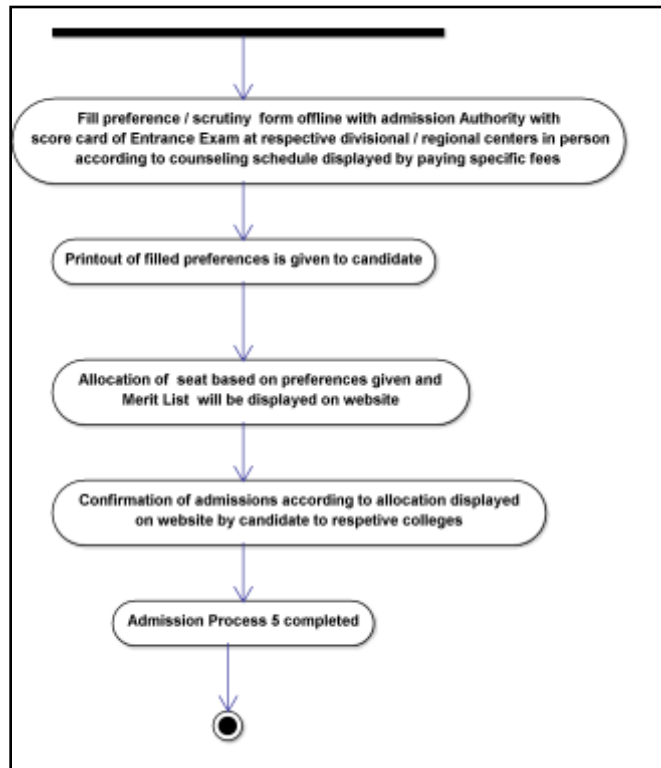


Figure 11 showing Admission Process 5 in Component 6

- 7) Agriculture Programmes: Researchers have studied Online Admission Process for Agriculture Programmes. There is no Entrance Examination for Admissions but process follows Online Admissions. After careful examination of steps, observations shows that after final submission of online form processes can be categorized into Admission Process 2 with slight changes as in **TABLE X** below.

TABLE X

Sr.No.	Organization conducting Agriculture Programmes's Admissions	Admission Process2
1	MCAER (Maharashtra Council of Agricultural Education and Research) [20]	1

Figures 12 and 13 show UML's Activity Diagram for Agriculture Programmes's Admissions.

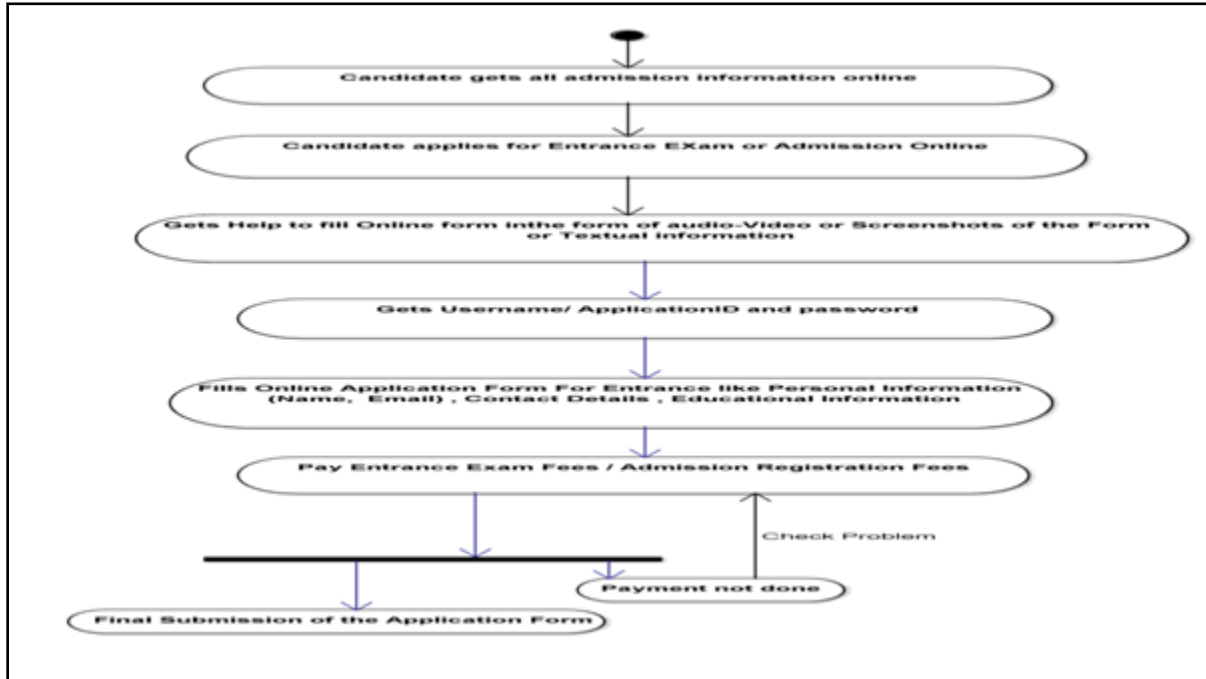


Figure 12 showing Online Admission Application Form Submission Process for Agriculture Programmes

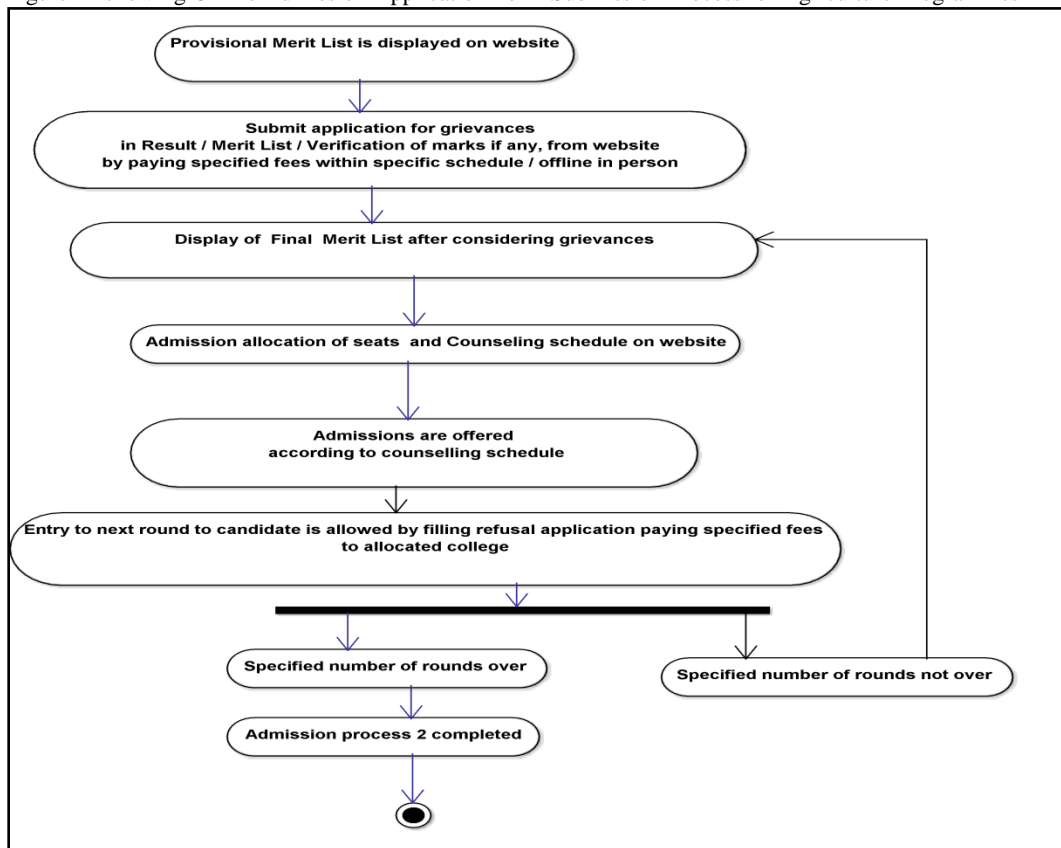


Figure 13 showing Admission Process 2 with slight changes for Agriculture Programmes as no Entrance Exam

8) **Education Programmes :** Researchers have studied 4 organization's Online Admission Processes for Education Programmes. After careful examination of steps observations shows that all 4 processes can be categorized into 2 Admission Processes as in **TABLE XI** below.

TABLE XI

Sr.No.	Organizations conducting Pharmacy Programme's Admissions	Admission Process1	Admission Process4
1	DHE (Directorate of Higher Education) for all State Universities [21]		1
2	PDrDYPTLVNM (Padmashree Dr.D.Y. Patil Vidyapeeth Navi Mumbai)	1	
3	TMVP (Tilak Maharashtra University , Pune)	1	
4	BVDU (Bharati Vidyapeeth Deemed University, Pune)	1	
	Total	3	1

Figures 14, 8 and 15 show UML's Activity Diagram for Education Programmes's Admissions.

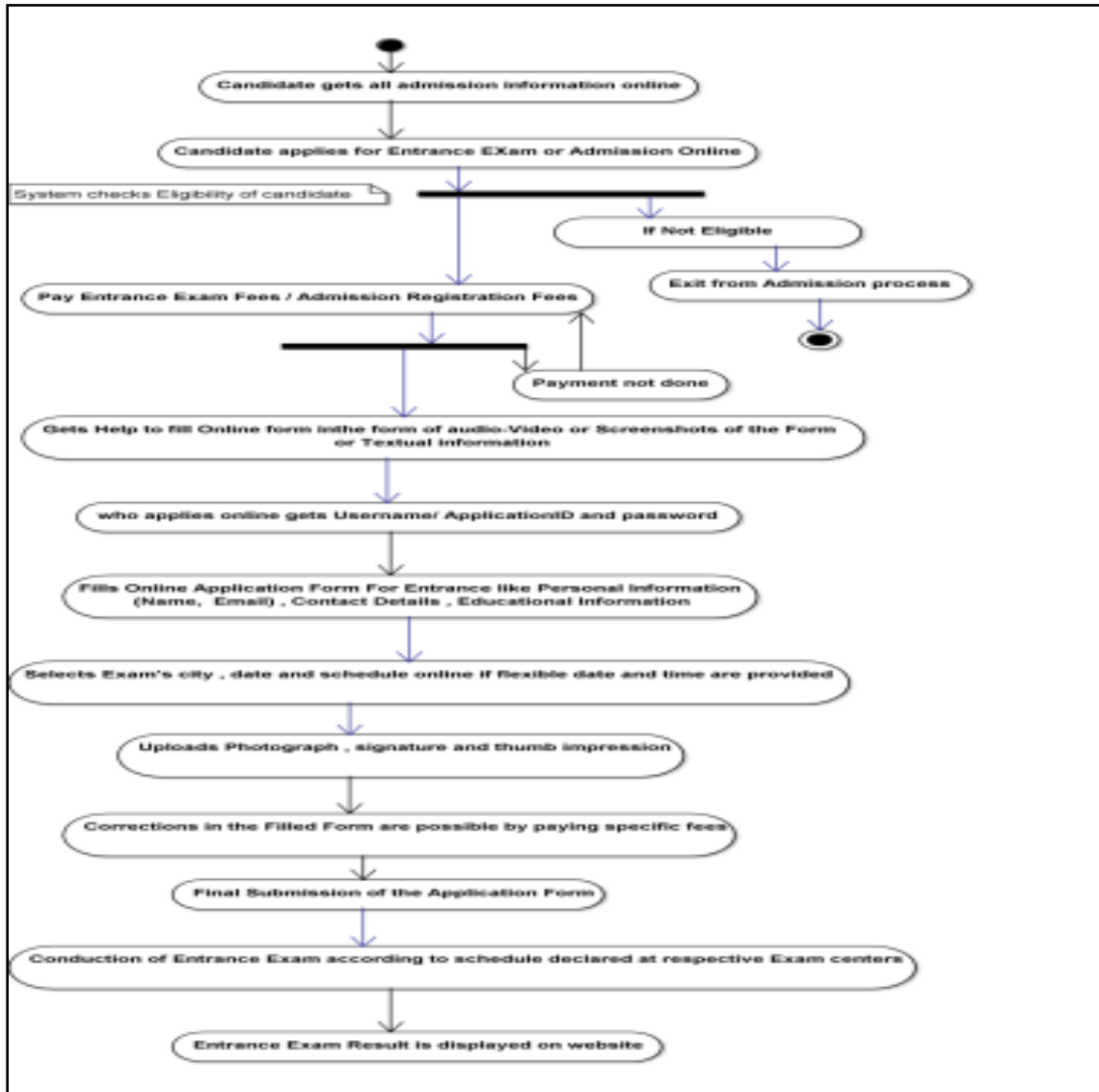


Figure 14 showing Online Admission Application Form Submission Process for Education Programmes

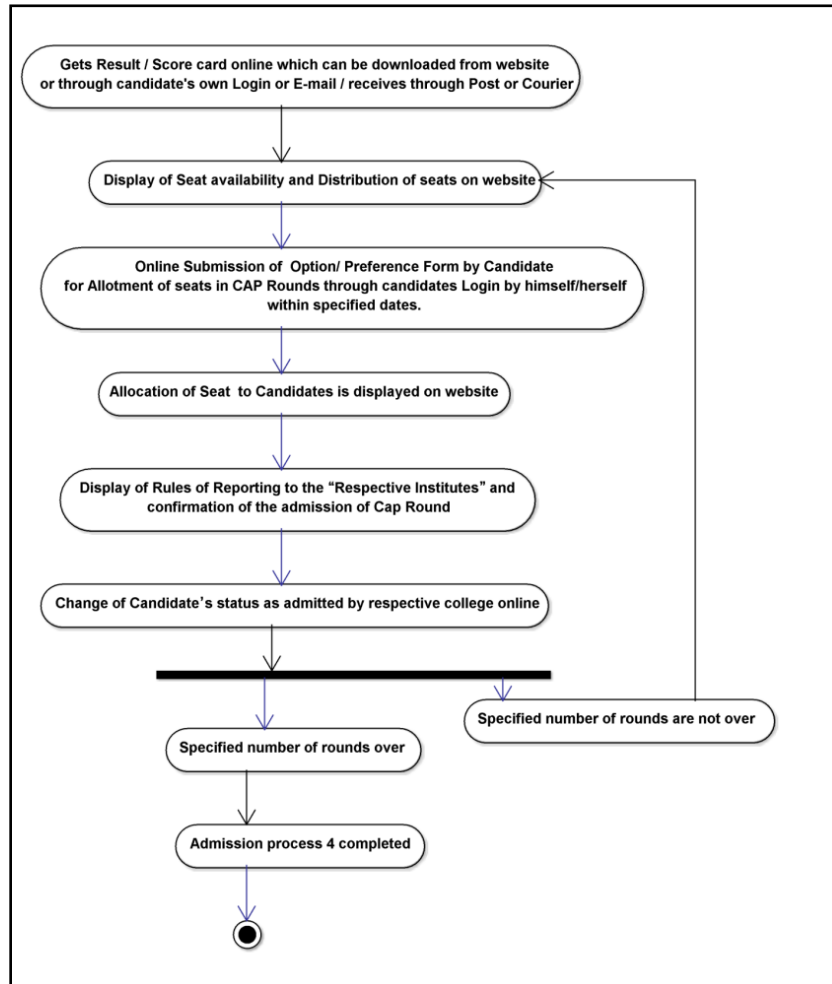


Figure 15 showing Admission Process 4 with slight changes than Figure 10 according to Education Programmes.

Optimization: After careful study of processes of above 8 Professional Programmes for further research on optimization researchers focused on following points

- 1 Online Steps are there but requires priority.
- 2 Online Steps are there but requires Improvement.
- 3 Offline Steps But Requires Online.

These Points Help Researchers To Design Optimized Framework For Online Admission System In Existing Setup.

1)Online Steps Are There But Requires Priority:

1)Eligibility Checking: In Online Admission Process for Education Programmes, form filling process first decides primary eligibility of candidate who wants to apply, if candidate fulfills eligibility then only system proceeds to fill next information else not. This avoids filling of information by ineligible candidates. So only eligible candidate's data will be stored by system. Thus only required data will be stored in system.

So priority should be to first check the eligibility of candidate before proceeding to accept any information. Thus optimization of resources will be achieved as only required data storage will happen which will result in time and cost saving of the OAS.

2) Payment Of Entrance Exam / Admission Registration Fees: Analysis of payment options for paying Admission Registration / Entrance Exam Fees shows different models. In some processes after issuing username and password to candidate system accepts the payment first, if payment is successful then only OAS accepts personal or qualification and other details. Researchers this model good as it avoids unnecessary filling of the Form if candidate is not interested. So priority should be to do the payment then only system will accept full information of candidate after checking eligibility. As payment is to be done before allowing students to fill the information, OAS will help to collect the part of the cost to be covered from candidate's admission registration fees and in turn results into optimization.

2)Online Steps Are There But Requires Improvement:

Feedback from following stakeholders of Online Admission System are taken

- 1) 137 Students who have used OAS for their admissions in various professional Programmes were contacted with questionnaire and their feedback on existing processes was collected.
- 2) Interviews of stakeholders involved in Admission process (Assistant Director Technical Incharge DTE, Director Education MCAER, Head Admissions DMER ,Govt Dental College Mumbai)
- 3) Interviews of stakeholders involved in design and development (MKCL, Head Online Applications (DTE Eng, MBA, MCA, Pharmacy), Kalp Technologies (MCAER, agri), CEO and M.D splash Technologies) following are steps where improvement is required

1) Late Status Update Of Paid Fees Status Update: Some systems first take all the information of candidate at the end generates Bank's E-challan where candidate has to fill the Admission registration fees in specified banks. After payment in the bank applicant gets unique transaction number through which candidate has to confirm the application. In this Model after payment in the bank candidate status is changed to paid fees. This process also has disadvantage that candidate might not fill the amount in bank. So all resources involved in accepting, storing candidate's data by system will be wasted. Extraneous data get stored in the system. Candidates also face lot of problems as after payment in bank also status paid takes time to update. Candidates get annoyed. Here also improvement in existing process is required .So as suggested by researchers payment of Entrance Exam / Admission Registration fees should be done first before accepting details of candidate, allowing students to pay fees using Net-Banking or Credit/ Debit Card or by entering DD number first which is already drawn in favour of Admission authority. As above payment options will result into opening of next form to fill candidate's information it will definitely does not annoy the student and result into optimization of time and cost of OAS.

2) Assistance Provided By The OAS For Filling Online The Form Also Needs Improvement: : Before form filling, one Audio-video should be present on website which will guide candidate to fill the form as most of organizations provide only textual information. Video should include screen shots of the actual form to be filled as it will result into great help for candidate who wants to apply for programme. It will increase student's satisfaction as system will become more users friendly.

3) Corrections In The Filled Form Facility: Once the online Admission application form is submitted, in some organizations candidate does not get facility to change data. As many times it happens that spelling mistake in name or wrong mobile number or blur images of students are uploaded. So candidate needs correction facility. Due to corrections, database of OAS needs to be changed which will result into cost, which has to be recovered from fees. As specific fees OAS will recover for corrections which will help in increase of student's satisfaction. But some dead line that is specific date has to be given before which only corrections should be possible at extra cost.

4) Flexibility to choose date, time and city for appearing for Entrance Exam or for Personal Interview / Group Discussion: Applicants should have flexibility to choose the date , time and city for appearing for Entrance Exam or for Personal Interview / Group Discussion according to their convenience. This will increase user's satisfaction.

Offline Steps but requires online:

1) Computerization of candidate's document verification: OAS in state universities admissions uses ARC (Application Receipt Centers) to verify the documents of applicant. For example we take Engineering and Technology Programmes Admissions latest data shows that there are 272 ARCs active during 2015-16 academic year admissions. For MBA (2014-15) Admissions there were 406 ARCs. According to reference for per submitted form of entrance Rs 50 /- is to be payable to ARC by Admission authority. If we can computerize this process by comparing data given by applicant with HSC board data used when they declare result and score by Entrance Exam authority thus data can be verified with computers. Thus cost to be spent on ARC centers can be reduced as number of ARC centers can be reduced. It will definitely result into sufficient cost saving. [27]

2) Avoidance of twice online filling form: If Entrance Exam to be qualified for Admission is conducted at state Level then also candidate has to fill Online application form **twice** once before Exam, once after exam with results of exam, so that based on score of Entrance Exam, Merit list can be prepared example for pharmacy. Similarly If Entrance Exam to be qualified for Admission is conducted by separate authority and admission authority is different then also candidate has to fill Online application form twice once before Exam, once after exam with results of exam, if data from Entrance exam conduction authority is taken that, Merit list can be prepared. Example for Management (MBA/MCA) admissions, Engineering and Technology admissions etc. This twice filling form can be avoided by taking data in soft form from Entrance Exam Authority say from CBSE who conducts JEE (Main) [23] and HSC Board and then processing above data for Merit list preparation. For optimization this suggestion will play important role in cost saving , but major research work will be required for its implementation.

3) Online Hall Ticket / Admit card and Score Card of Entrance Exam availability: Many organizations are sending Hall Ticket / Admit card and Score Card of Entrance Exam through post or courier. If Hall Ticket/Admit card and Score card of Entrance Exam with digital signatures can be downloaded/ sent to email means it is available on website through candidate's own login. So there will not exist the problem of issuing of duplicate Hall Tickets at exam centers before 2 hours. So organization that gets emailId of applicant should send Hall ticket /Admit Card and Score Card to Email. Thus cost of sending Hall Tickets /

Admit card and Score Card of Entrance Exam through post or courier will be saved. As a result of above study researchers are going to design and propose a framework which will optimize the Online Admission System Process in the existing setup. As system is large first optimized framework's Component Diagram is as shown in Figure 16.

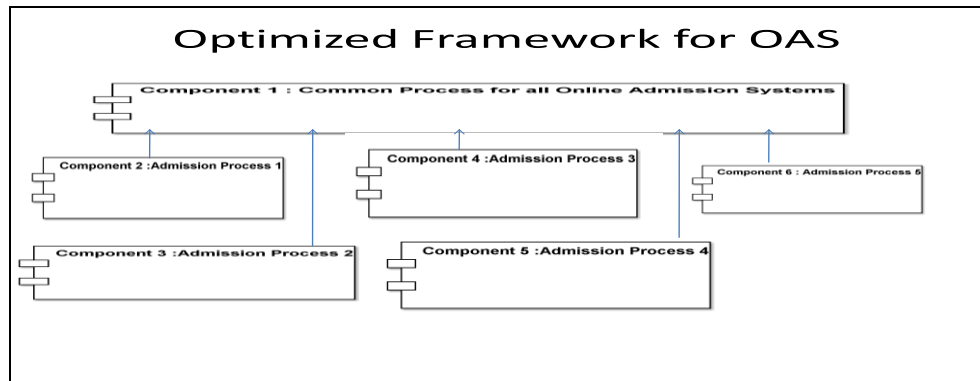


Figure 16 Component Diagram for optimized framework.

Thus detailed Activity Diagrams for optimized framework consist of

- 1) Figure 17 shows common optimized steps put together in Component 1.
- 2) Figure 8 shows Admission Process 1 and Admission Process 3 in Component 2 and Component 4 respectively.
- 3) Figure 9 shows Admission Process 2 in Component 3.
- 4) Figure 10 shows Admission Process 4 in Component 5.
- 5) Figure 11 shows Admission Process 5 in Component 6.

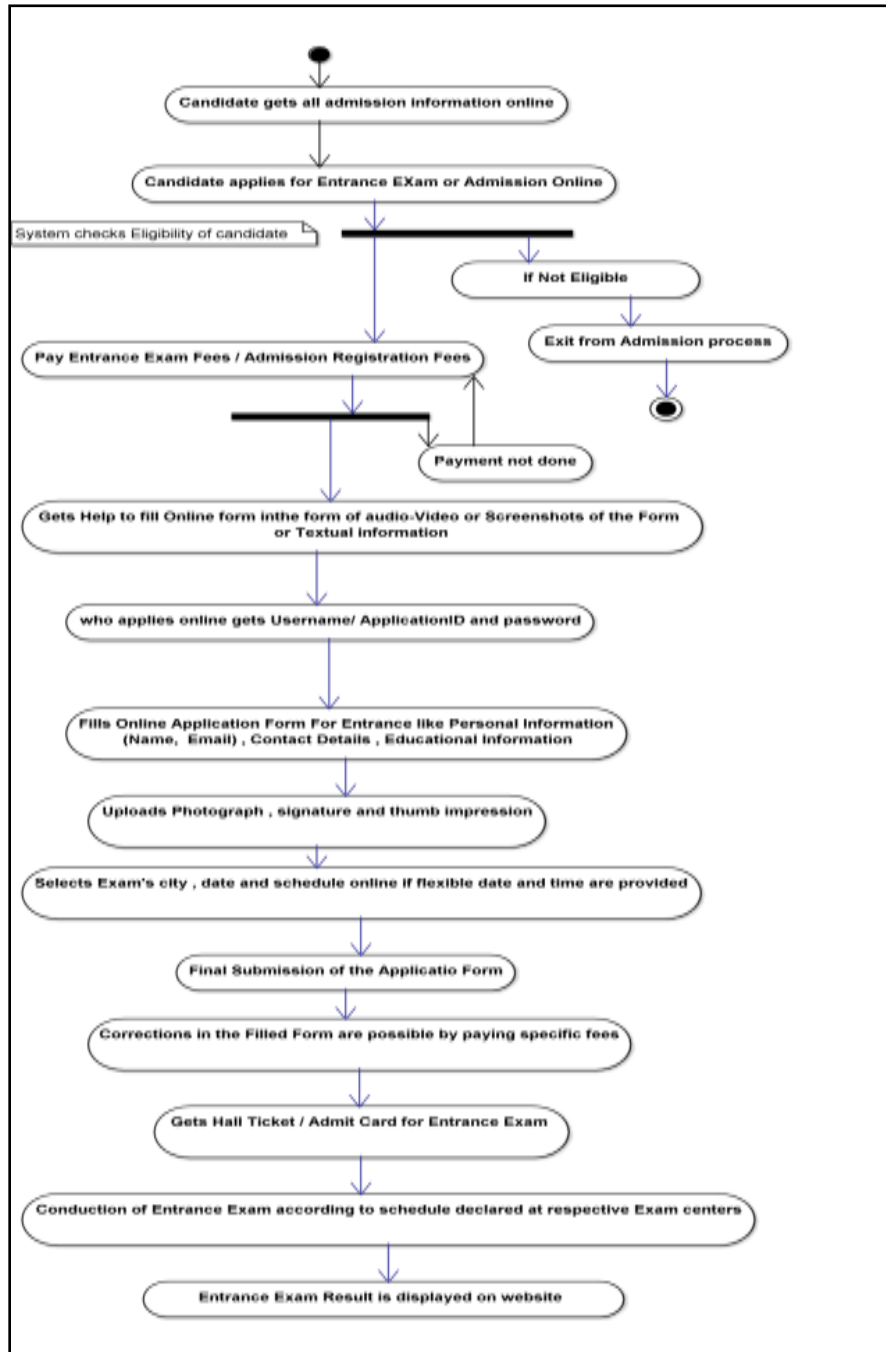


Figure 17 showing common optimized steps in framework in Component1.

Conclusion: Thus researchers designed and proposed a framework, which will optimize the processes used till date in the existing setup and fulfilled research objectives of paper. Framework contributes to research by fitting all the admission processes in this one framework. It will help any organization who wants to build an Online Admission System for their admissions. Thus framework will be useful to design, development and evaluation of Online Admission System for any academic organization. All stakeholders of Online Admission System will be definitely benefited with this research.

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