Software Design Document

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1.Introduction

1.1 Purpose of this document

The Software Design Specification (SDS) document will provide an understanding of the system features to develop meaningful test cases and give useful feedback to the developers.

It focuses on specifying a high-level view of the architecture of our system, and on the interaction between the user and the system.

1.2 Scope of the development project

This document defines the the UI of the application. It contains all the features present for the project seekers and the project creators. It will also contain the features available to the panelists.

It includes information about the about the different classes, functions, methods and their implementations.

1.3 Definitions, acronyms, and abbreviations

a. SRS: Software Requirements Specification.

b. SDS: Software Design Specification

c. IEEE: Institutes of Electrics and Electronics Engineers

1.4 References

- IEEE SDS Template

1.5 Overview of document

This SDS is divided into seven sections with various sub-sections. The sections of the Software Design Document are:

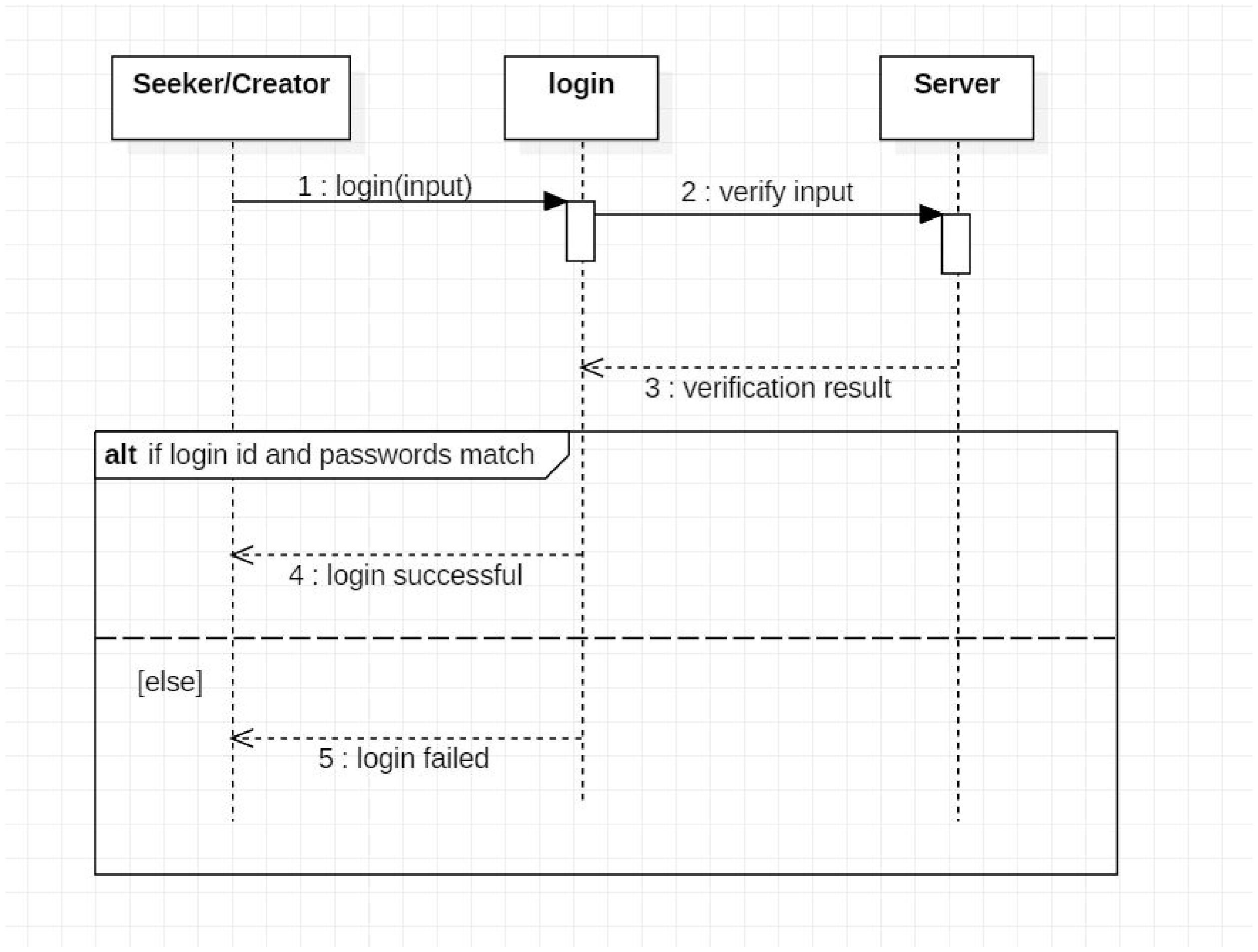
1. **Introduction**: It gives information about the document, its purpose, the scope of development of the project, some important definitions and abbreviations used in the document.
2. **Logical Architecture**: It gives information about the Logical Architecture Description and Components of the application.
3. **Execution Architecture:** It gives information about the runtime environment, processes, deployment view of the application.

4. **Design Decisions and Trade-offs:** It gives information about the decisions taken and the reason as to why they were chosen over other alternatives.
5. **Pseudocode for components (not included in this document)**: It gives information about the pseudocode of the application, as the name indicates.
6. **Appendices**: It gives information about the subsidiary matter if any.

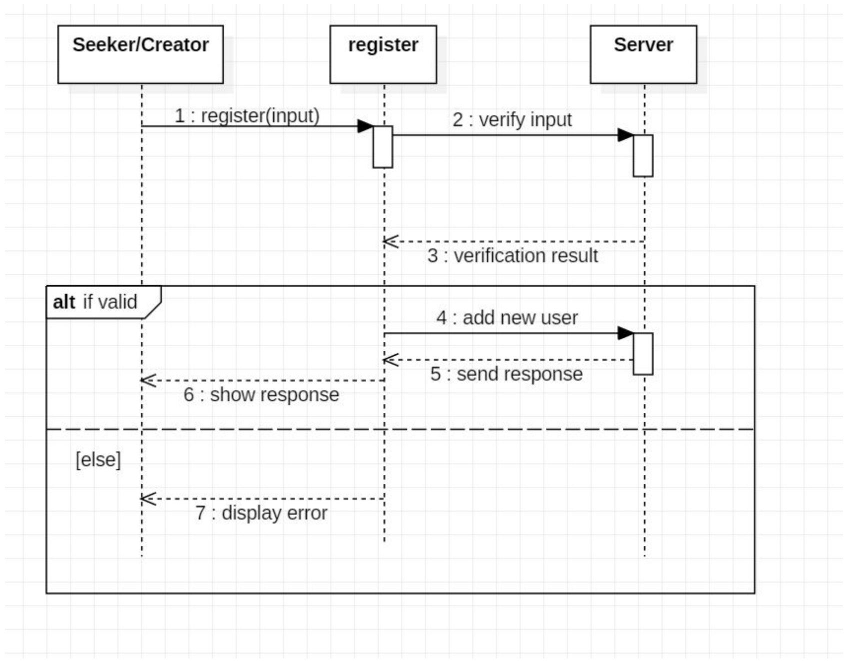
2. Logical Architecture (Class Diagram, Sequence Diagram, State Diagram)

2.1 Sequence Diagrams

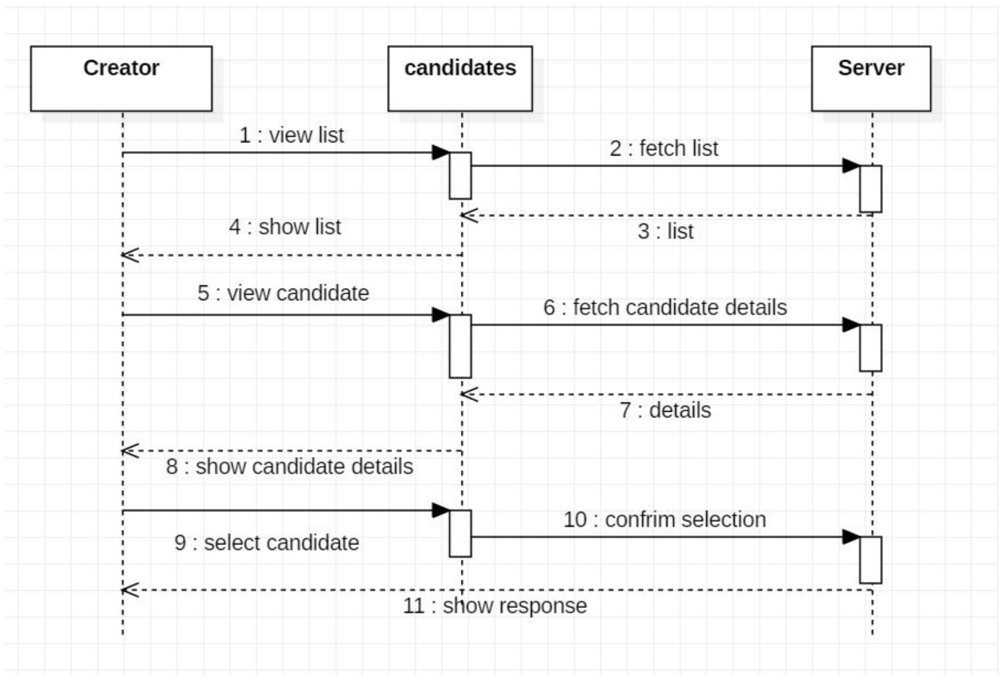
1.) Login Page (for project seeker,creator and panelist)



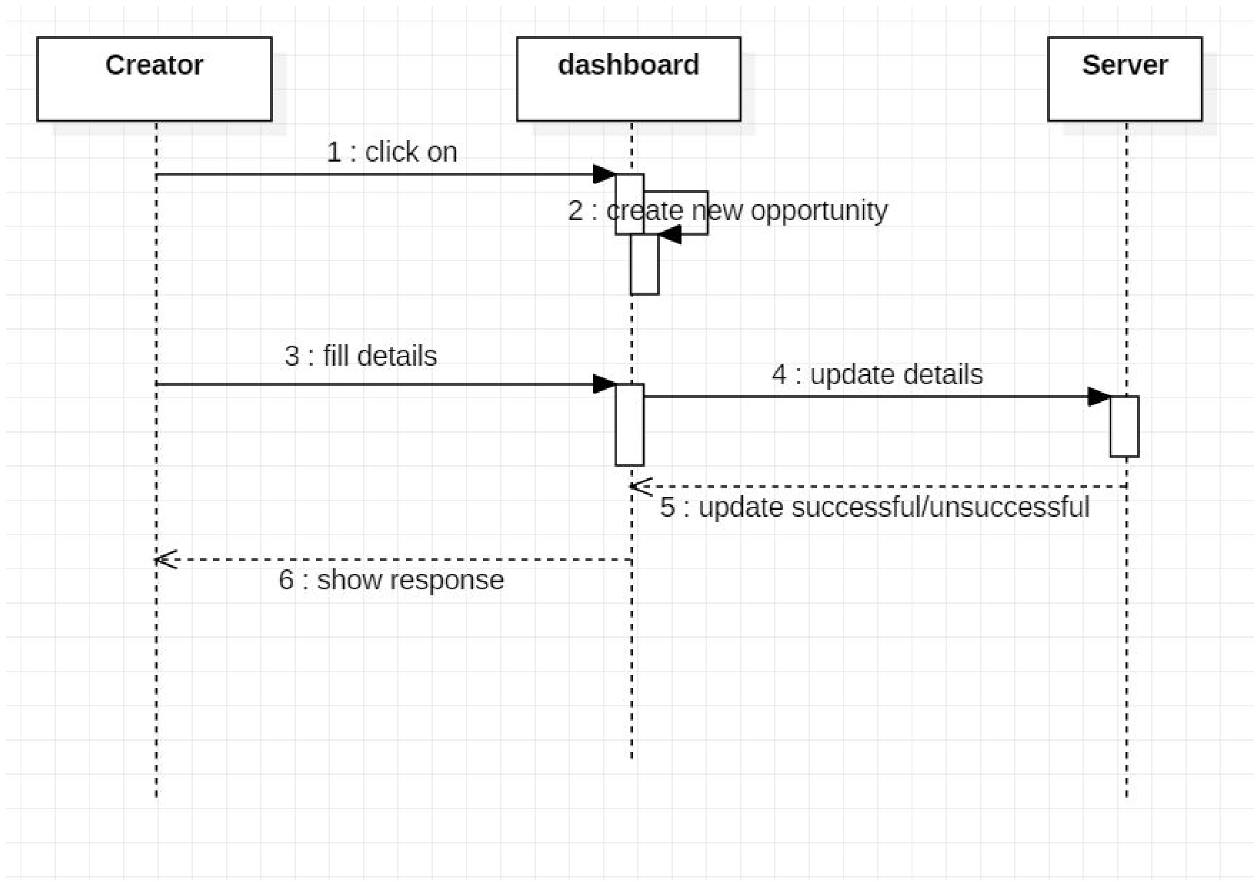
2.) Register Page (for project seeker,creator and panelist)



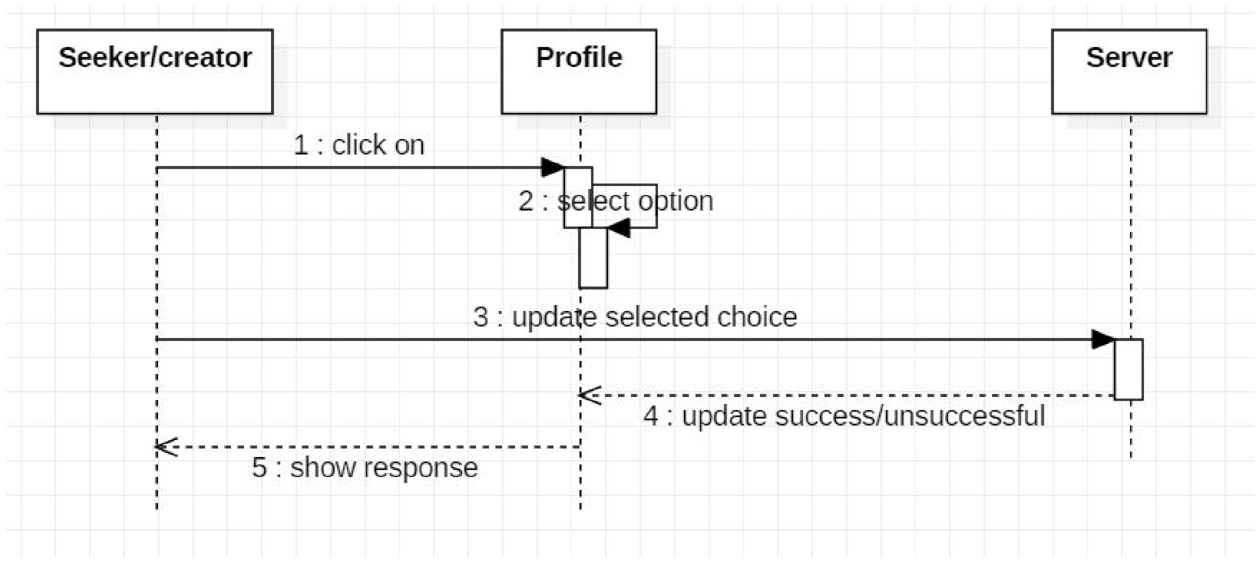
3.) Creator selecting the applicants



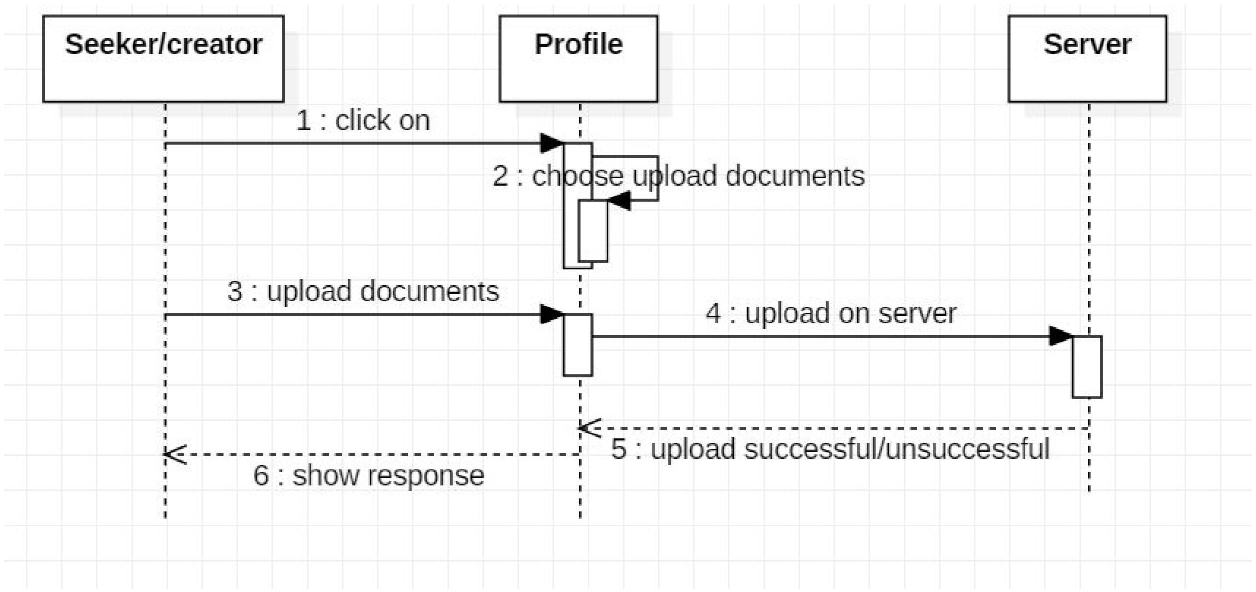
4.) Create New Opportunity



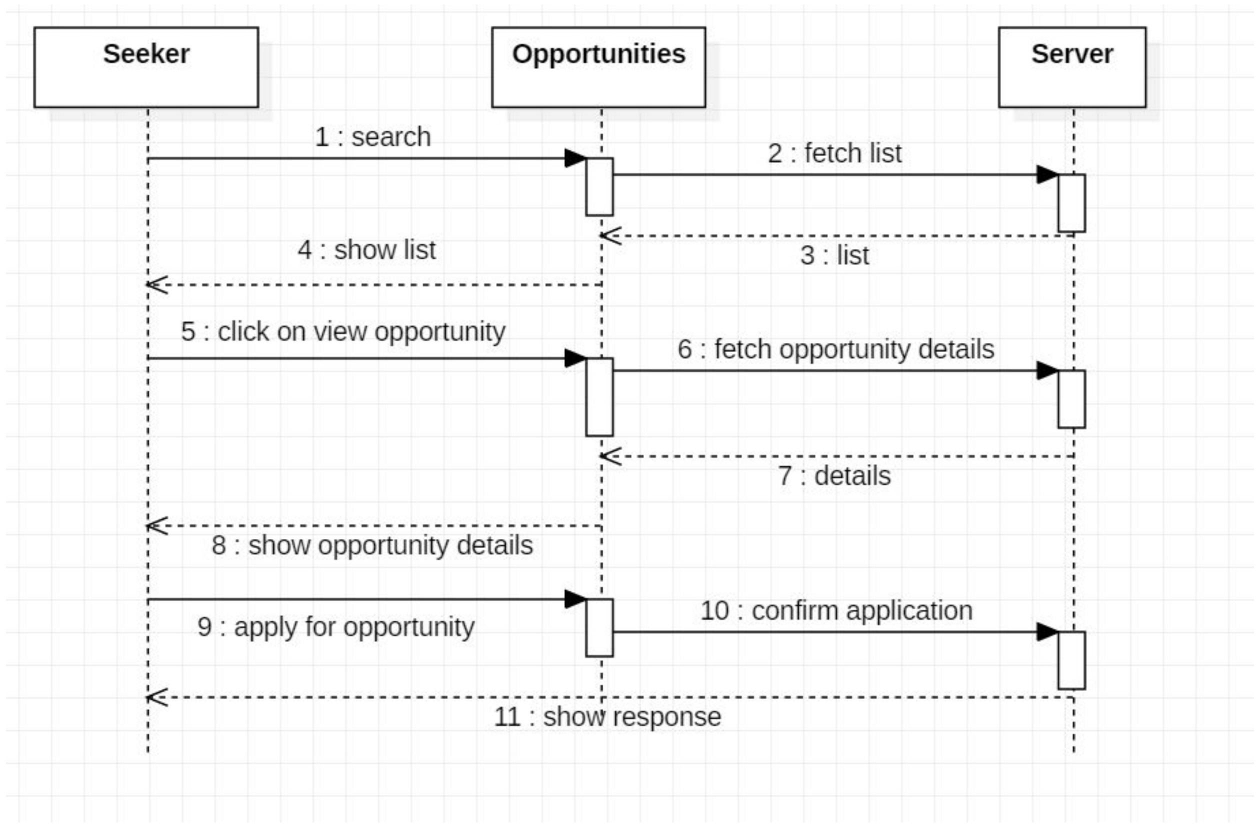
5.) Update profile for all



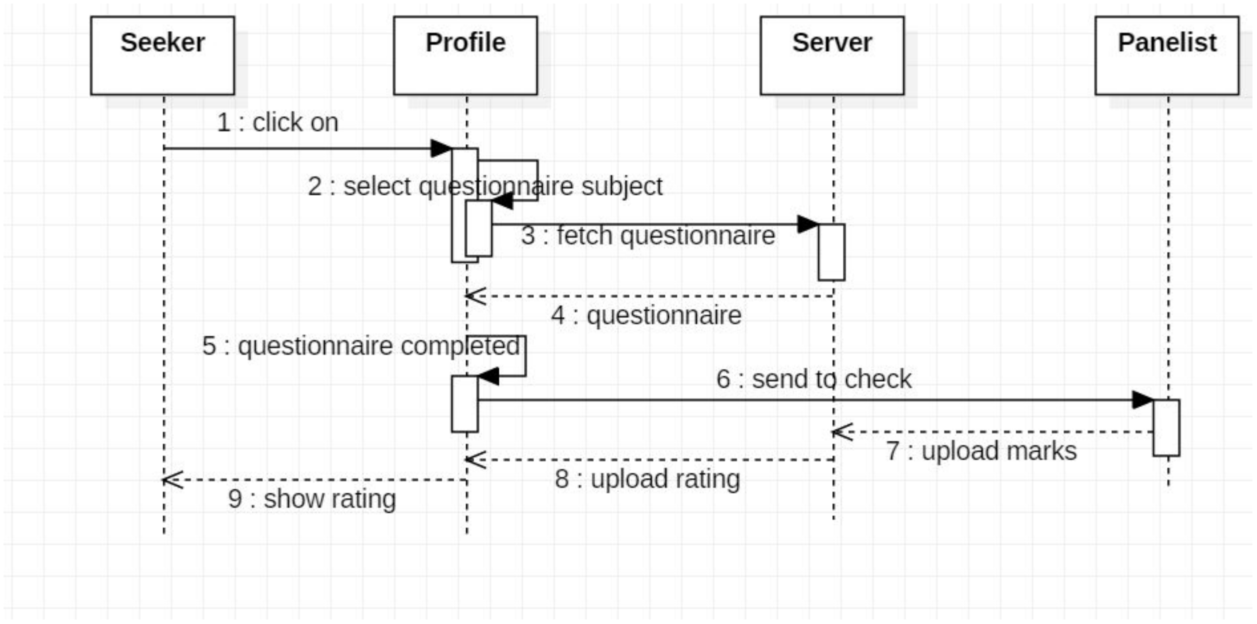
6.) Upload docs for all



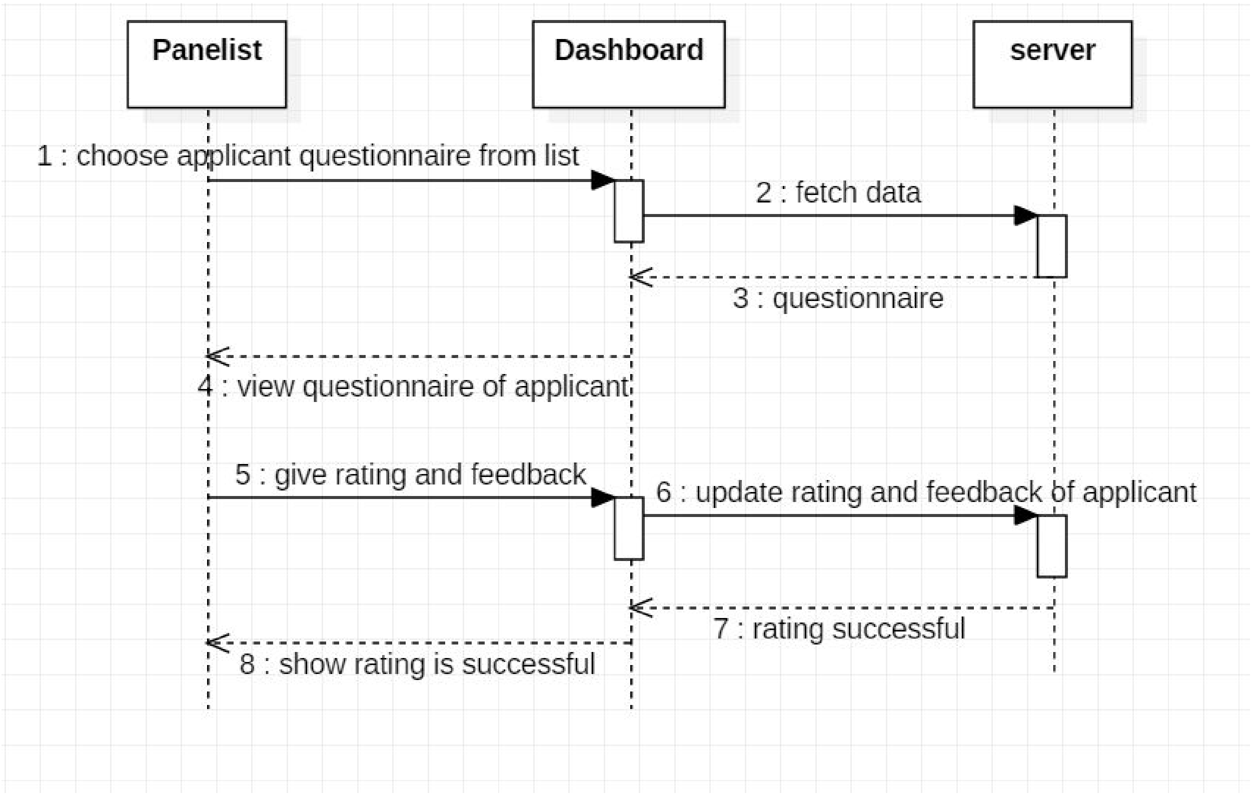
7.) View and apply opportunity for seekers



8.) Rating Process

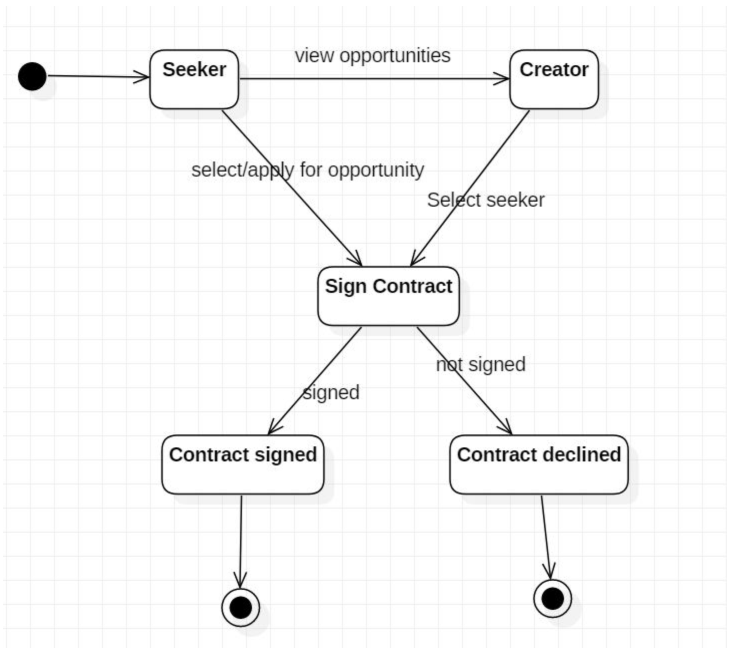


9.) Panelist Rating Seekers

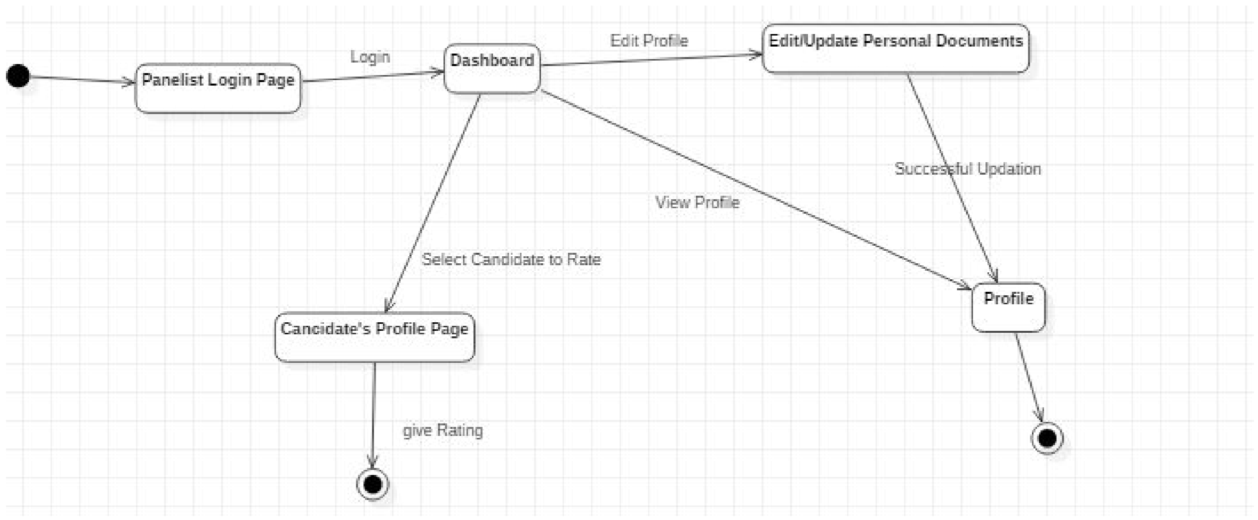

Panelist
Dashboard
server
1 : choose applicant questionnaire from list
2 : fetch data
3 : questionnaire
4 : view questionnaire of applicant
5 : give rating and feedback
6 : update rating and feedback of applicant
7 : rating successful
8 : show rating is successful

2.2 State Diagrams

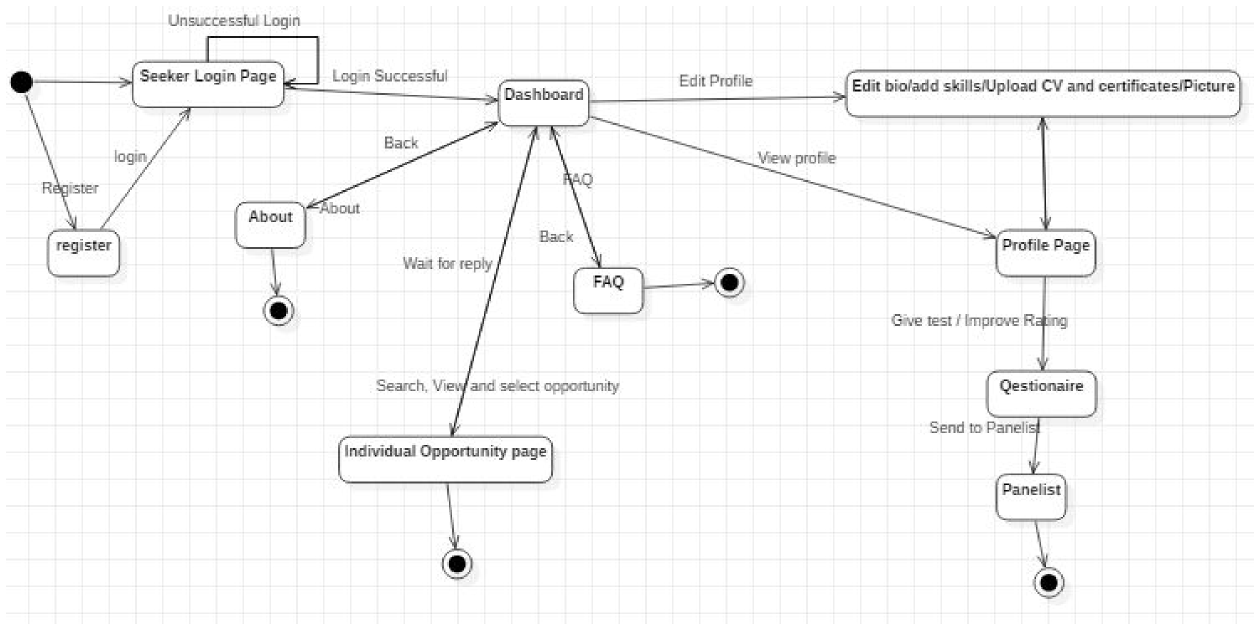
1.) Contract



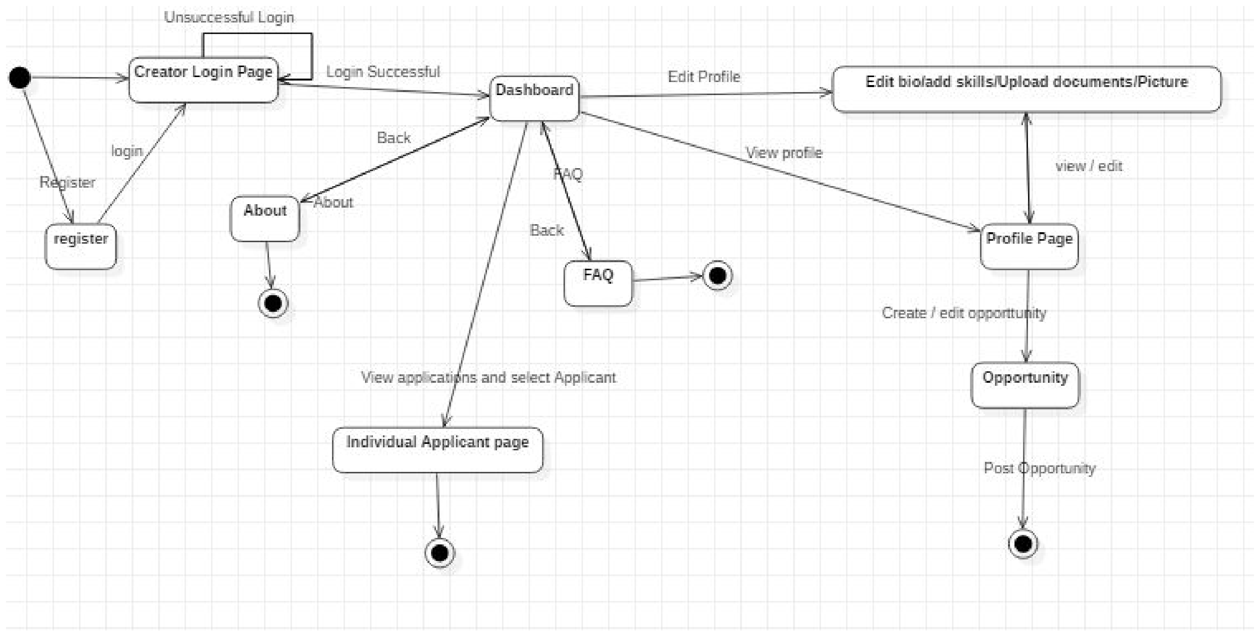
2.) Panelist State Diagram



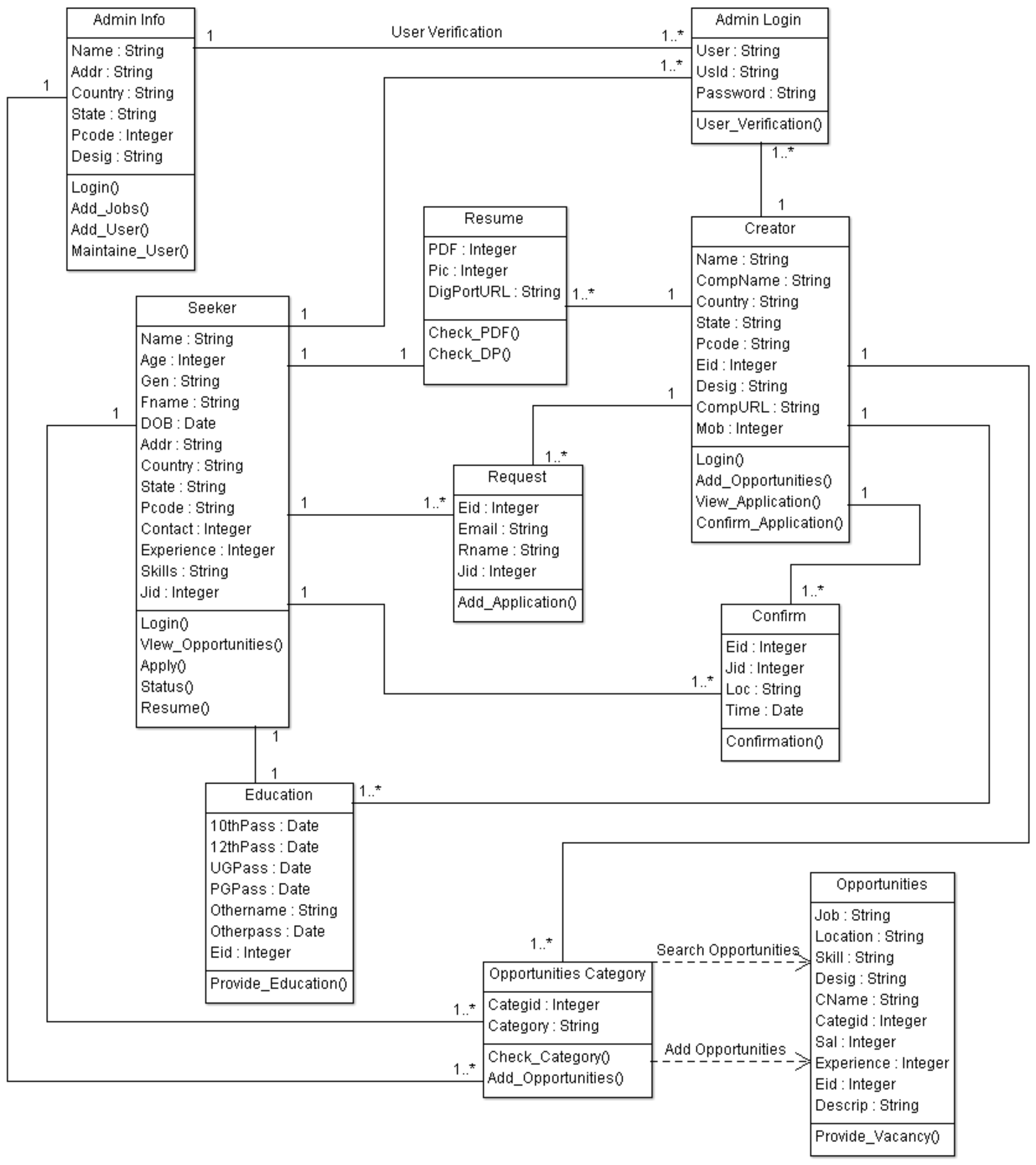
3.) Seeker State Diagram



4.) Creator State Diagram



2.3 Class diagram



2.4 Diagram Description

2.4.1 Sequence Diagram

Arrow line signifies that an action is performed. Response is shown by dotted arrows. Self loops represents that the action performed is affecting itself.

2.4.1.1. Login Page: It allows Seeker to login with their mail domain and Creator to login with the username and password that are being registered in the database already.

2.4.1.2. Register Page: For first time users who does not hold any account on the portal they would be required to register themselves.

2.4.1.3. Creator selecting Applicants: This sequence diagram shows the sequence in which the creator selects the seekers on the portal after seekers have clicked the get in Touch Button.

2.4.1.4. Create New opportunity : It defines the sequence by which the creator will create new opportunities on the portal.

2.4.1.5. Update Profile : It demonstrates how all the users (seekers/creators/panelists) can update or edit their profiles.

2.4.1.6 Upload Documents for all : It defines the sequence in which Seeker and Creator will upload the required documents in order to publish their respective profile with valid documentations.

2.4.1.7. View and apply opportunity for seekers : This defines how the seekers can view and apply indifferent opportunities

2.4.1.8. Rating Process : in order to get started with applying for opportunities Seeker has to get a rating from our panelists, so this sequence diagram defines the same.

2.4.1.9. Panelist Rating Seekers : This provides the detailed process of how a panelist will review and rate the seekers.

2.4.2 State Diagram

2.4.2.1. Contract State Diagram : This State Diagram defines the states of system when the seeker applies for an opportunity and creator selects them then whether the contract is signed or not

2.4.2.2. Panelist State Diagram : This diagram represents the states achieved by the panelists while rating a candidate. Beginning from the login page till the rating of the candidates, it shows the states a panelist has to go through.

2.4.2.3. Seeker State Diagram : This diagram defines the sequential states of a seeker beginning from the login state till updating the profile or improving its rating. It also shows the states through which the seekers apply to different opportunities available.

2.4.2.4. Creator State Diagram : This diagram defines the states of the creator which they go through while selecting an appropriate candidate for their projects. Also, they go through different states while editing their profiles and updating them.

3. Execution Architecture

Runtime environment required is any PC/laptop with access to internet.

3.1 Reuse and relationships to other products

Nill.

4. Design decisions and tradeoffs

The user interface and the designs for this software are kept simple so that any person can use this functionality easily.

5. Pseudo-Code for components

1. **Class Name- Application**
    a. **Method** - main()
        i. Input : String args[], *(to be written)*
        ii. Output : Runs the application
            1. SpringApplication.run();
2. **Class Name- CompanyController**
    a. **Method** - showJobSeeker

      i. Input : id, model
      ii. Output : profile of the company
         1. Company company = select a specific company by its id.
         2. Select the model of the company
         3. return "companyprofile"

   b. **Method -** showJob
      i. Input : cid, jobid, model
      ii. Output : job profile
         1. JobPosting p1 = select a specific posted job.
         2. Company company = select a specific company by its id.
         3. Select the model of the job
         4. Select the model of the company
         5. Return “jobprofile”
   c. **Method** - showjobapplications
      i. Input : jobid, model
      ii. Output : job profile
         1. JobPosting p1 = select a specific posted job.
         2. Select the model of the job
         3. Return “jobprofile”
   d. **Methods** - getjobs
      i. Input : companyid, model
      ii. Output : company’s jobs
         1. List<> companyJobPostings = new ArrayList<String>();
         2. companyJobPosting = get company’s posted jobs in the list
         3. Company company = select a specific company by its id.
         4. Select the model of the jobs
         5. Select the model of the company
         6. Return companyjobs

3. **Class name-** InterviewController
   a. **Method -** createInterview
      i. Input : appid, location, datetime
      ii. Output : Affirmative reply
         1. Jobapplication ja = select a specific job application based on the id
         2. ja.setInterviewFlag(true);
         3. ja.setInterviewLocation(location);

4. ja.setInterviewTime(Date.valueOf(datetime));
5. ja.setInterviewAccepted(false);
6. jobAppDao.updateApplication(ja);
7. verifyUrl
8. Send affirmative message to the applicant

b. **Method -** acceptinterview
   i. Input : appid
   ii. Output : Affirmative reply
      1. Jobapplication ja = select a specific job application based on the id
      2. ja.setInterviewaccepted(true);
      3. jobAppDao.updateApplication(ja);
      4. Company c = get job lists and companies
      5. Send affirmative message to the company

4. **Class name -** JobapplicationController
   a. **Method -** applyPage
      i. Input : jobseekerId, jobId, Model
      ii. Output : jobapplication
   b. **Method -** Apply
      i. Input : jobseekerId, jobId, Model, file
      ii. Output : userjobprofile, redirect:upload status
         1. if (resumeFlag == true)
         2. if (file.equals(empty()))
         3. redirectAttributes.addFlashAttribute("message", "Please select a file to upload");
         4. byte[] bytes = file.get().getBytes();
         5. Path path = Paths.get(UPLOADED_FOLDER + file.get().getOriginalFilename());
         6. JobApplication ja = new JobApplication();
         7. ja = jobAppDao.apply(Integer.parseInt(jobSeekerId), Integer.parseInt(jobId), resumeFlag,
         8. JobSeeker js = jobSeekerDao.getJobSeeker(Integer.parseInt(jobSeekerId));
         9. JobPosting jp = jobDao.getJobPosting(Integer.parseInt(jobId));
         10. emailService.sendSimpleMessage(js.getEmailId(),
         11. Company company = jp.getCompany();

12. if (ij.contains(Integer.parseInt(jobId)))
13. if (il.contains(Integer.parseInt(jobId)))
14. model.addAttribute("job", jp);
15. model.addAttribute("seeker", js);
16. model.addAttribute("company", company);
17. model.addAttribute("interested", i);
18. model.addAttribute("applied", j);
19. Files.write(path, bytes);
20. JobApplication ja = new JobApplication();
21. ja = jobAppDao.apply(Integer.parseInt(jobSeekerId), Integer.parseInt(jobId), resumeFlag, resumePath);
22. JobSeeker js = jobSeekerDao.getJobSeeker(Integer.parseInt(jobSeekerId));
23. JobPosting jp = jobDao.getJobPosting(Integer.parseInt(jobId));
24. emailService.sendSimpleMessage(js.getEmailId(),
25. if (ij.contains(Integer.parseInt(jobId)))
26. if (il.contains(Integer.parseInt(jobId)))
27. model.addAttribute("job", jp);
28. model.addAttribute("seeker", js);
29. model.addAttribute("company", company);
30. model.addAttribute("interested", i);
31. model.addAttribute("applied", j);

c. **Method -** cancelapplication
   i. Input : jobappId
   ii. Output : deletion confirmation
      1. Boolean deleted = return 0 or 1 after deletion
      2. if(deleted)
      3. Return deleted

d. **Method -** modifyApplicationState
   i. Input : jobappid, state
   ii. Output : modification confirmation
      1. Jobapplication ja = modify the application
      2. if(ja == null) “error”
      3. Else “modified”

e. **Method -** uploadstatus
      1. Return “uploadstatus”

f. **Method -** getappliedjobs
    i. Input : id
    ii. Output : confirmation message

```
1. Query query = createquery
2. Query.setparameter - id
3. List<Integer> list = new ArrayList<Integer>();
4.       List<> querylist = query.getResultList();
5.       for (Iterator<?> iterator = querylist.iterator();
   iterator.hasNext();)
6.          int uid = (int) iterator.next();
7.          list.add(uid);
8.           Print list
```

g. **Method -** getAppliedjobs
    i. Input : jobseekerId
    ii. Output : list of applied jobs

```
1. List<> jobSeekerAppliedList=getJobApplicationList();
2. List<Integer> jobIdList = new ArrayList<Integer>();
3. for (Iterator iterator = jobSeekerAppliedList.iterator();
   iterator.hasNext();)
4. JobApplication ja = (JobApplication) iterator.next();
5. int jobId = ja.getJobPosting().getJobId();
6. jobIdList.add(jobId);
```

5. **Class Name -** Jobpostingcontroller
    a. **Method -** showHomePage
        i. Input : cid, model
        ii. Output : postjob

```
1. Company company = get company details
2.       Set model according to the company id
3.       Set model of each company
```

    b. **Method -** createJobPosting
        i. Input : cid, model, title, description, responsibilities, location, salary
        ii. Output : jobprofile, error

```
1. JobPosting j = new JobPosting();
2.       j.setTitle(title);
3.       j.setDescription(description);
4.       j.setResponsibilities(responsibilities);
```

```
5.      j.setLocation(location);
6.      j.setSalary(salary);
7.      j.setKeywords(title + " " + description + " " + responsibilities + "
   " + location);
8.      try         JobPosting p1 = create job posting based on the
   company id
9.          Add job in the model
10.         Company company = get company details
11.         model.addAttribute("company", company);
12.         return "jobprofile";
13. catch (Exception e)
14.         HttpHeaders httpHeaders = new HttpHeaders();
15.         Map<String, Object> message = new HashMap<String,
   Object>();
16.         Map<String, Object> response = new HashMap<String,
   Object>();
17.         message.put("code", "400");
18.         message.put("msg", "another passenger with the phone
   number  already exists.")
```

c. **Method -** deletejobposting
   i. Input : id, model
   ii. Output : confirmation message

```
1. if (jobDao.deleteJobPosting(id))
2.          String message = "Job Posting with JobID " + id + " is
   deleted successfully";
3.          model.addAttribute("message", message);
4.          return "message";
5.  else
6.          return "error"
```

d. **Method -** showUpdatepage
   i. Input :id, cid, model
   ii. Output : updatejob
      1. Company company= select the company using the cid
      2. Get job potings using the id
      3. Add job to the model
      4. Add company to the model

e. **Method -** updateJobposting
   i. Input : cid, model, title, description, responsibilities, location, salary
   ii. Output: updated profile

```
1. if (job != null)
2.         job.setjobId(id);
3.         job.setDescription(description);
4.         job.setState(Integer.parseInt(state));
5.         job.setTitle(title);
6.         job.setLocation(location);
7.         job.setResponsibilities(responsibilities);
8.         JobPosting p1 = jobDao.updateJobPosting(job);
9.         model.addAttribute("job", p1);
10.        Company company =
   companyDao.getCompany(Integer.parseInt(cid));
11.        model.addAttribute("company", company);
```

f. **Method-** modifyjobstate
   i. Input: jobid, state
   ii. Output: confirmation message
      1. Get job postings using the job id
      2. Set state of job
      3. Update job by calling updateJobposting function and sending the job id

6. **Class name -** Mailcontroller

a. **Method -** createMail
   i. Input : model
   ii. Output : confirmation of sent mai

```
1. String action =
   request.getRequestURL().substring(request.getRequestURL().lastI
   ndexOf("/") + 1);
2.      Map<String, String> props = labels.get(action);
3.      Set<String> keys = props.keySet();
4.      Iterator<String> iterator = keys.iterator();
5.      while (iterator.hasNext()) {
6.         String key = iterator.next();
7.         model.addAttribute(key, props.get(key));
```

```
8.        model.addAttribute("mailObject", new MailObject());
```

b. **Method -** createMail
   i. Input: model, mailObject, errors
   ii. Output : return to home page

```
1. if (errors.hasErrors())
2.        return "mail/send";
3. emailService.sendSimpleMessage(mailObject.getTo(),
   mailObject.getSubject(), mailObject.getText());
```

7. **Class Name -** MainController
   a. **Method -** showHomepage
      i. Output : index page
   b. **Method -** showRegisterpage
      i. Output : register page
   c. **Method -** login
      i. Input : emailid, password, type, model
      ii. Output: profile of company or the seeker

```
1. if (type.equals("recruiter"))
2.        list = companyDao.PasswordLookUp(email);
3.        if (list.size() == 0)
4.                model.addAttribute("message", message);
5.          return "index";
6.         else
7.          if (pwd.equals(list.get(0)))
8.            List<Integer> cidl = new ArrayList<Integer>();
9.            cidl = companyDao.getCompanyIdFromEmail(email);
10.           Company cmp =
   companyDao.getCompany(cidl.get(0));
11.           model.addAttribute("company", cmp);
12.
13.           return "companyprofile";
14. else if (type.equals("seeker"))
15.       list = jobSeekerDao.PasswordLookUp(email);
16.       if (list.size() == 0)
17.         model.addAttribute("message", message);
18.         return "index";
19.       else
```

```
        if (pwd.equals(list.get(0)))
            List<Integer> jsl = new ArrayList<Integer>();
            jsl = jobSeekerDao.getUserIdFromEmail(email);
            JobSeeker js = jobSeekerDao.getJobSeeker(jsl.get(0));
            model.addAttribute("seeker", js);
            return "userprofile";
    System.out.println(list);
    model.addAttribute("message", message);
```

d. **Method -** verification

   i. Input : type, pin, user id, model

   ii. Output :

```
if (type.equals("seeker"))
    JobSeeker j = jobSeekerDao.getJobSeeker(userId);
    if (j.getVerificationCode() == pin)
        j.setVerified(true);
        jobSeekerDao.verify(j);
        model.addAttribute("seeker", j);
        return "userregister";
    else
        return "error";
else
    Company j = companyDao.getCompany(userId);
    if (j.getVerificationCode() == pin)
        j.setVerified(true);
        companyDao.verify(j);
        model.addAttribute("company", j);
        return "companyregister";
    else
        return "error";
```

8. **Class name -** EmailService

   a. **Method -** sendSimpleMessage

      i. Input : to,subject,text

   b. **Method -** sendSimpleMessageUsingTemplate

      i. Input : to,subject,template,templateArgs

   c. **Method -** sendMessageWithAttachment

        i. Input : to,subject,text,pathToAttachment

9. **Class name -** EmailServiceImpl
    a. **Method -** sendSimpleMessage
        i. Input : to,subject,text
        ii. Output : send message
    b. **Method -** sendSimpleMessageUsingTemplate
        i. Input : to,subject,template,templateArgs
        ii. Output : sendSimpleMessage
    c. **Method -** sendMessageWithAttachment
        i. Input : to,subject,text,pathToAttachment
        ii. Output : send message
10. **Class name -** MailObject
    a. **Method -** getTo
        i. Output : to
    b. **Method -** setTo
        i. Input : To
    c. **Method -** getSubject
        i. Output : subject
    d. **Method -** setSubject
        i. Input : subject
    e. **Method -** getText
        i. Output : Text
    f. **Method -** setText
        i. Input : text
11. **Class name -** JobSeeker
    a. **Method -** getJobSeekerId
        i. Output : JobSeekerId
    b. **Method -** setJobSeekerId
        i. Input : JobSeekerId
    c. **Method -** getFirstName
        i. Output : firstName
    d. **Method -** setFirstName
        i. Input : firstName
    e. **Method -** getLastName
        i. Output : lastName
    f. **Method -** setLastName

   i. Input : lastName

g. **Method -** getEmailId
   i. Output : emailId
h. **Method -** setEmailId
   i. Input : emailId
i. **Method -** getPassword
   i. Output :password
j. **Method -** setPassword
   i. Input : password
k. **Method -** getWorkEx
   i. Output : workEx
l. **Method -** setWorkEx
   i. Input : workEx
m. **Method -** getHighestEducation
   i. Output : highestEducation
n. **Method -** setHighestEducation
   i. Input : highestEducation
o. **Method -** getSkills
   i. Output : skills
p. **Method -** setSkills
   i. Input : Skills
q. **Method -** isVerified
   i. Output : verified
r. **Method -** getVerificationCode
   i. Output : verificationCode
s. **Method -** setVerified
   i. Input : verified
t. **Method -** setVerificationCode
   i. Input : verificationCode
u. **Method -** getInterestedjobs
   i. Output : interestedjobs
v. **Method -** setInterestedjobs
   i. Input : interestedjobs
w. **Method -** getJobApplication
   i. Output : jobApplicationList
x. **Method -** setJobApplication

i. Input : jobApplicationList

10. **Interface** - CompanyDao

  A. Method - PasswordLookUp

  @param emailid

  @return password for the given emailId

  B. Method - Company createCompany

  @param com

  @return Created company

  @throws Exception

  C. Method - Company updateCompany

  @param js

  @return Updated company

  D. Method - Company getCompany

  @param id

  @return Company

  E. Method - void verify

  @param c

  F. Method - List<?> getJobsByCompany

  @param companyId

  @param state

  @return List of jobs according to the state

  G. Method - List<Integer> getCompanyIdFromEmail

  @param emailid

  @return

11. **Interface -** InterestedDao

  A. **Method -** Interested createInterest

  @param in

@return Created interest

@throws Exception

B. **Method -** boolean deleteInterest

@param id

@return true if interest has been deleted

C. **Method -** Interested getInterest

@param id

@return Interest

D. **Method -** List<?> getInterestedJobId

@param jobId

@param userId

@return List of the job ids of the jobs the user is interested in

E. **Method -** List<Integer> getAllInterestedJobId

@param userId

@return List of the job ids of the jobs the user is interested in

12. Interface InterviewDao

A. **Method -** Interview createInterview

@param jobseekerid

@param company

@param location

@param datetime

@param flag

B. **Method -** String acceptInterview

@param jobseekerid

C. **Method -** List<interview> getAllInterviews

@param jobseekerid

13. Interface JobApplicationDao

A. **Method -** JobApplication apply

@param jobseekerId
@param jobId
@param resumeFlag
@param resumePath
@return The newly created job application

B. **Method -** JobApplication getJobApplication
@param jobAppId
@return Required job application

C. **Method -** boolean cancel
@param jobAppId
@return True if the application was successfully cancelled

D. **Method -** JobApplication modifyJobApplicationStatus
@param state
@return Modified job application

E. **Method -** JobApplication updateApplication
@param ja
@return Updated job application

14. Interface JobPostingDao

A. **Method -** JopPosting createJobPosting
@param job
@param cid
@return New JobPosting
@throws Exception

B. **Method -** JobPosting getJobPosting
@param id
@return Requested JobPosting

C. **Method -** booloean deleteJobPosting
@param id
@return True if JobPosting is Deleted

D. **Method -** JobPosting updateJobPosting

@param job
@return Updated Job Posting

15. Interface JobSeekerDao

A. **Method -** List<?> filterJobs
-> @param jpv
->@param jobIds
->@return Job Postings according to the provided parameter

B. **Method -** JobSeeker createJobSeeker
->@param job
->@return new job seeker
->@throws Exception

C. **Method -** JobSeeker updateJobSeeker
->@param js
->@return updated job seeker

D. **Method -** List<String> PasswordLookUp
->@param emalid
->@return password

E. **Method -** void verify
->@param j

F. **Method -** List<?> searchJobs
->@param searchString
->@return Jobs for that search string

G. **Method -**List<Integer> getUserIdFromEmail
->@param emailid
->@return userId

16. Class - CompanyDaoImpl implements CompanyDao
-> Private Variables EntityManager entityManager using annotation - PersistenceContext

```
    -> @Override - annotation
    Method - public List<String> PasswordLookUp
        ->@param emailid
        -> Datbase query ="SELECT password FROM Company c WHERE c.companyUser
= :emailId "
        -> Set parameter to be passed as “EmailId” -> query.setParameter("emailId",
emailid);
        -> new ArrayList<String>()
        -> query.getResultList()
        for (iterate over the query.list)
            -> to add password to the list   -> list.add(pwd)
        -> print("list ::::::::::::::::::::::::::::::       " + list)
        -> @return list

    -> @Override
    Method - public List<Integer> getCompanyIdFromEmail
        ->@param emailid
        ->Database query ="SELECT companyId FROM Company c WHERE
c.companyUser = :emailId "
        ->Set parameter to be passed as -> emailid
        ->new ArrayList<Integer>();
        ->query.getResultList();
        for (Iterate over the queryList)
            -> To add Company Id to the list -> cid
        -> return list

    -> @Override
    //this method handles all the exception that could be throwed
    Method - public Company createCompany
        -> @param company c
        -> throws exception
        -> try -> entityManager.persist(c);
        -> catch -> Exception  -> e.printStackTrace()
        -> return c

    -> @Override
```

```
Method public Company getCompany
    ->@param id
    ->Company js -> null
    -> js -> entityManager.find(Company.class, id)
    -> return js

-> @Override
Method public Company updateCompany(Company js) {
    -> Company c -> getCompany -> @param js.getCompanyId()
    -> c.setCompanyName -> @param js.getCompanyName()
    -> c.setCompanyUser -> @param js.getCompanyUser()
    -> c.setDescription -> @param js.getDescription()
    -> c.setHeadquarters -> js.getHeadquarters()
    -> c.setVerified -> js.isVerified()
    -> try -> if (c is not null)
        Then -> entityManager.merge(c)
    -> catch ->Exception e -> e.printStackTrace()
    -> return c

-> @Override
Method - public void verify(Company c) {
    -> Company c1 -> getCompany -> @param c.getCompanyId()
    -> c1.setVerified -> @param -> c.isVerified());
    -> try -> if (c not equal to null) Then -> entityManager.merge(c1)
    -> catch -> Exception e -> e.printStackTrace()


-> @Override
Method -> public List<?> getJobsByCompany -> @param company
    -> Database query to be passed -> SELECT jobId, title, description,
responsibilities, location, salary, state, companyId, companyName FROM JobPostingsView jp
WHERE jp.companyId = :companyId
    ->Parameters to be sent in query -> companyId
    -> query.getResultList()
    -> return querylist
```

```
17.  Class - public class InterviewDaoImp -> implements InterviewDao {
            Variables -> private -> EntityManager entityManager

            -> @Override
            Method - public Interview createInterview()
                        ->@param jobseekerid
                        ->@param company
                        ->@param location
                        ->@param datetime
`                       ->@param flag
                  -> new Interview()
                  -> interview.setCompany() -> @param company
                  -> interview.setJobseekerid() -> @param jobseekerid
                  -> interview.setDatetime() -> @param datetime
                  -> interview.setLocation() -> @param location
                  -> interview.setFlag() -> @param string “false”
                  -> entityManager.merge() -> interview
                  ->return interview

            -> @Override
            -> Method public String acceptInterview()
                        -> @param jobseekerid
                  -> new Interview()
                  -> interview.setFlag() -> @param string as “true”
                  -> Database Query updation -> UPDATE interview SET flag = true WHERE jobseekerid= :id
                  -> query.setParameter() -> @param "id", jobseekerid
                  -> entityManager.merge() -> interview
                  -> return "updated"



            ->@Override
            -> Method - public List<Interview> getAllInterviews()
                        -> @param jobSeekerId -> int
```

->Database query -> SELECT company, location, time FROM interview WHERE jobseekerid = :jobseekerid
->return null;

18. Class public class JobPostingDaoImpl -> implements JobPostingDao

```
-> @PersistenceContext -> private EntityManager entityManager;
-> @Override
-> Method -> public JobPosting createJobPosting(JobPosting job, int cid) {
            -> try -> System.out.println("1");
            -> Company c -> entityManager.find() -> @param Company.class, cid
            -> job.setCompany(c);
            -> System.out.println("2");
            -> entityManager.persist(job);
            -> System.out.println("3");
            -> catch -> Exception e -> e.printStackTrace()
            -> return job

-> @Override
-> Method -> public JobPosting getJobPosting()
            @Param id
      ->JobPosting j -> null
      -> j -> entityManager.find() -> @param JobPosting.class, id
      -> return j

-> @Override
-> public boolean deleteJobPosting(int id) {
      ->JobPosting p -> getJobPosting() -> @param id
      -> if (p is not equal to null) -> entityManager.remove() -> @param p
      -> else -> return -> false
      -> return true

-> @Override
-> Method public JobPosting updateJobPosting()
      ->@param -> JobPosting p
      -> JobPosting p1 -> getJobPosting() -> @Param p.getJobId
      -> p1.setDescription() -> @param p.getDescription()
      ->p1.setLocation() -> @param p.getLocation()
      -> p1.setResponsibilities() -> @param p.getResponsibilities()
      -> p1.setSalary() -> @param p.getSalary()
      -> p1.setState() -> @param p.getState()
      -> p1.setTitle() -> @param p.getTitle()
      -> try -> if (p1 if not equal to null) -> entityManager.merge() -> @param p1
      -> catch -> Exception e -> e.printStackTrace()
      -> return p1
```

6. Appendices *(if any)*

Nill.