

Final Project of YSD B02 J2EE batch

Academy Training Management System

Project Summary:

The Academy Training Management System is a microservice based system to manage the selection process for new trainees, training activities and all the evaluation functionalities. As there are multiple scope of this system, we will break it into several services. Training Selection System (TSS) will be helpful for choosing candidates to onboard for the training program. Training Management System (TMS) will manage all the training activities with all task or assignment submissions. Evaluation Management System (EMS) service is for evaluating or analyzing every trainee's activities to track their progress.

Major Work outline:

- Preparing SRS, WBS, Design Documents with UML Diagrams
- Preparation of API documentation
- Create Database with appropriate logic and mapping
- Back-End Development
- Front-End Development
- Integration of Front-End with API
- Implement clean coding concepts, design patterns
- Integrate Unit testing, debugging and logging
- Push to Git-Gerrit/GitHub
- Preparation of Project Presentation

Deliverables Plan:

Deliverables	Items covered/Activity	Tentative Time
SRS	- Requirements Analysis - Project Understanding	End of 1st Week from starting the project
WBS	- Project Planning - Works Breakdown	End of 1st Week from starting the project
Design Documents and UML Diagrams	- Depth features of this project - Use case diagram, DFD Diagram, ERD Diagram, Activity Diagram etc.	End of 1st Week from starting the project
API Documentation	- All API structures and responses	End of 2nd Week from starting the project
Project PPT	- Demonstration of whole application	End of 4th Week from starting the project
Source Code, executable file	- Push to GitHub private repo - Preparation of GitHub documentation	End of 4th Week from starting the project

Module/Service 1 - Trainee Selection System (TSS)

1. Applicants Registration:

Applicants should be able to register themselves to our portal. For the registration purpose they have to insert below informations:

- First name
- Last name
- Gender
- Date of birth
- Valid G-mail account
- Contact number
- Degree name
- Educational institute
- CGPA
- Passing year
- Present address

During the applicant registration process, there should be a way to upload candidate's photo and CV / resume.

2. Apply for the Desired Circular:

There should a panel / dashboard, by which registered applicants can apply for desired job circular.

To make it clear, let's say **Applicant A** has registered to our portal. Now he can go through different job posts that are currently accepting applicants. After that he can apply for the desired circular.

3. Approval of Applicants:

Members from the admin panel can view all the applicant's information. They can sort this data by

- Particular job post
- Gender
- Degree name
- Educational institute
- CGPA
- Passing year

Once they find any applicant suitable for selection, they can mark that applicant **APPROVED FOR INTERVIEW** for that particular job circular.

Note that, one applicant might apply for multiple circular. So the approval system should be job circular wise. That means if one applicant is marked **APPROVED FOR INTERVIEW** for Java circular should not be treated as **APPROVED FOR INTERVIEW** for Android circular.

4. Admit Card Generation

There should be a functionality to automatically prepare system generated admit card for the selected applicants. All the admit card should contain unique serial number / bar code, QR code for personal identification.

5. Track Participants of the Exams (Hidden Code on Copies)

During the written exam, BJIT executives would put a unique code on each participants answer sheet for identification. Our system should be able to generate this code. And store it for future references.

6. Upload Marks of the Participants

BJIT admins will assign evaluators for the marking. Those evaluator will have the option to upload each candidate's mark to the portal. Those marking will be done based on different categories (Need to define the categories later).

7. Internal Mailing System to Send Necessary Emails

We need to integrate mailing service to this portal. So that we can send mails to the applicants and inform about their current status of the application (i.e, selected for interview, passed written exam, passed technical viva etc).

8. Applicant Dashboard, Notice Board

There should be an application dashboard, or notice board section. Where the applicants will be able to see the notices / notifications. (i.e, selected for interview, passed written exam, passed technical viva etc).

9. Upload Marks and Prepare Results

In this panel BJIT admins can upload marks for the technical viva and HR viva rounds.

10. Select Final Trainees List:

There should be dashboard / page where BJIT admins can see the finally selected candidates for a particular job circular. This page should be similar to a rank list. Where candidates will be sorted according to their scores.

Module/Service 2 - Training Management System (TMS):

1. Trainers and Trainee Registration

Trainers and Trainee registration process will be done by Admin. For trainees' registration these fields can be considered:

- Full name
- Profile Picture
- Gender
- Date of birth
- Valid G-mail account
- Contact number
- Degree name
- Educational institute
- CGPA
- Passing year
- Present address

For trainers' registration we may consider below fields:

- Full name
- Profile Picture
- Designation
- Joining Date
- Total years of experience
- Expertises
- Contact number
- Present Address

2. Create Batches

Create a New Batch (as example: YSD_B02_J2EE) with necessary fields including starting date and ending date.

3. Create Courses

Admin should be able to create courses and assign trainer on those courses as example Domain Specific Training (J2EE), Soft Skill Training, SCRUM Training, Analytical Skill Development etc.

4. Assign Trainers/Trainees to Batches

We need to assign Trainees in a specific Batch (as example: YSD_B02_J2EE). If possible create a dynamic UI for assigning multiple trainees to a batch at a time.

5. Batch Scheduling

A batch needs to be scheduled properly, in a Batch there can be multiple training courses like Domain Specific Training, Soft Skill Training, SCRUM Training etc. Admin will be able to create/assign the training programs and make a schedule with these.

6. Assignment/Daily task creation

Trainers will be able to create Assignment/Daily Task and assign to batch, set the deadline of submission.

7. Classroom features with a dashboard, notice board

A classroom module should be there with below features:

- a. Trainers can upload any Message/File/Comments in this Classroom.
- b. All the data will be shown in date wise order.
- c. Trainees may search/filter the data.
- d. It will be great if trainees can comment under the posts of Trainer.
- e. A notice board can be there which will be managed by Trainers.

8. Submit the assignments

Trainees will submit their assignments, trainers will be able to see the submissions. We will expect Trainee will be able to submit the files in any format like PDF/Docs/Word/PNG.

9. Group chat feature

A group chat feature is needed to communicate among the participants of a specific batch. Sharing images/files will be appreciable, at least textual communication seems OK in this phase.

Module/Service 3 - Evaluation Management System (EMS):

1. Trainee/Trainers Registration

Trainee/Trainers need to be registered by system through giving their all kinds of information.

2. Assign trainees to batches

Assign every trainee to a specific batch. In that case batch information should be available in the system.

3. Assignment/Daily task creation

Task creation feature is an option which will be created by trainers giving the title of the task or assignment. Trainees will be able to submit their task with file attachments.

4. Daily task evaluation

Analyze and evaluate the submissions manually and upload the daily task evaluation, while preparing the evaluation there will be 5 criterias:

Requirement understanding	Expected Output	Code Quality	Demonstration/ Presentation	Live Coding/ Code Understanding
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Each of the above criterias will contain 2 marks. So total 10 marks will be there.

5. Mini project evaluation

Analyze and evaluate the submissions manually and upload the Mini Project evaluation, while preparing the evaluation there will be 5 criterias as above. And 10 marks on each criteria, total 50 marks.

6. Mid project evaluation

Analyze and evaluate the submissions manually and upload the Mini Project evaluation, while preparing the evaluation there will be 5 criterias as above. And 20 marks on each criteria, total 100 marks.

7. Final project evaluation

Final project evaluation will be a very detailed feature, for now you may focus on below criteria:

Requirement understanding	Expected Output	Code Quality	Demonstration/ Presentation	Live Coding/ Code Understanding
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There will be marks on SRS, WBS, Design Documents, Presentation PPT etc. which can be fixed in dynamic way.

8. Manager's evaluation

Trainers will upload the Manager's evaluation on below parameters:

BJIT Tools, ERP Git, Redmine, NC etc. - 15	Office Rules-10	Sincerity and hard-working mindset-10	Quality mindset-10	Attendance-10	Communication skill-10	English Language Skill-10
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Here is total 85 which needs to be converted to 100.

9. Aptitude test and CEO office interview score upload

Trainers will upload the scores of Aptitude Test and CEO Office/HR Interview to the Portal.

10. Final score generation

There will be a weight based Final Score Generation strategy, we will explain this in details later.