Basic Details of the Team and Problem Statement

Problem Statement Title: Online Web Portal for Examination

Category Name: 6th to 9th

Team Name: Brainstorm Brigade

Team Leader Name: Ishan Sinha
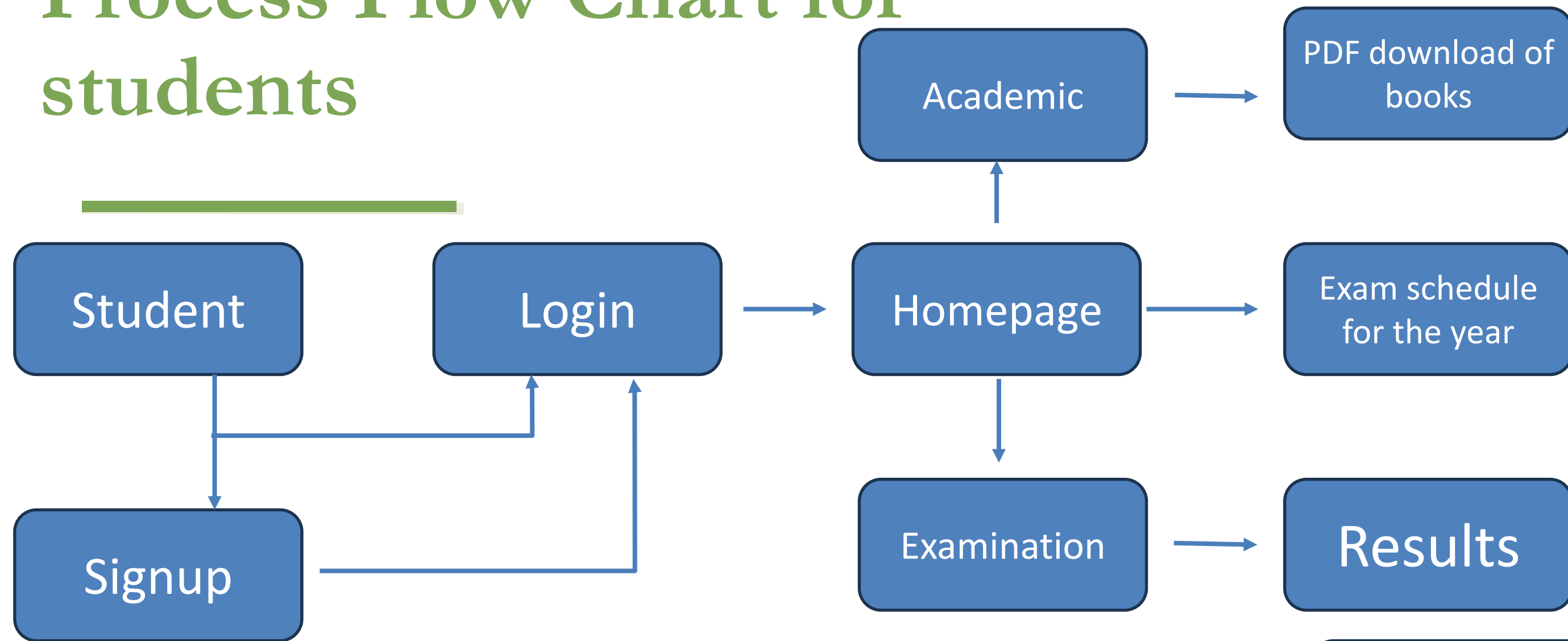
School Name: Bal Bharati Public School Dwarka

Description of our idea along with prototype

The current examination process is time-consuming and prone to errors, lacking effective tools for performance tracking. The proposed solution is an online web portal that simplifies exam administration, automates grading, tracks student performance over time, and manages student data efficiently.
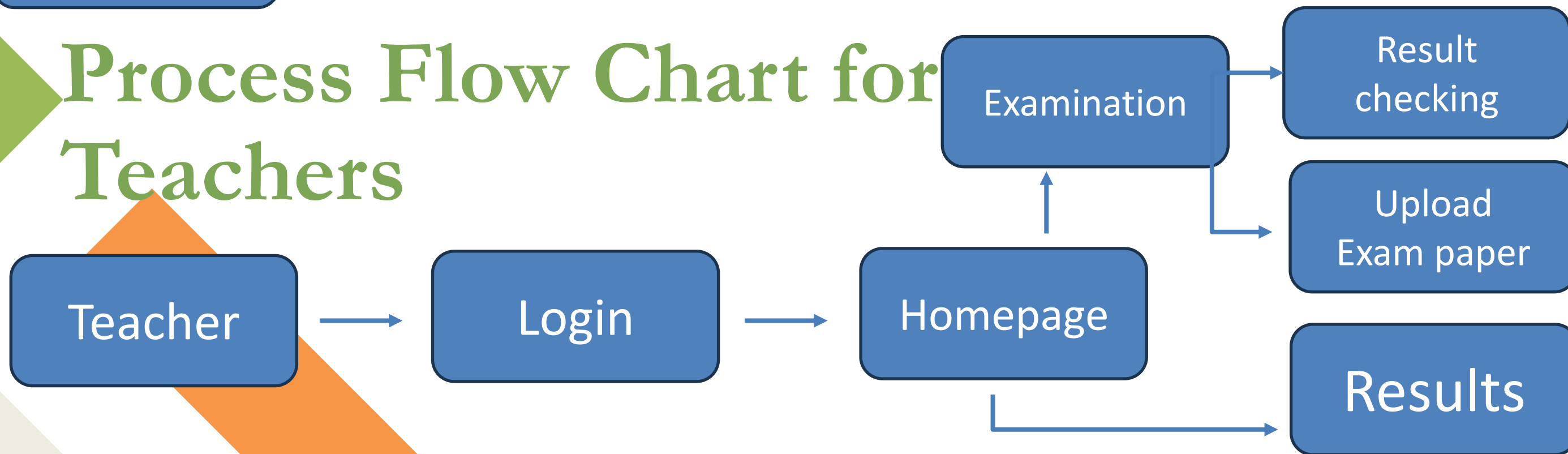
Key Features:

- **Teacher Dashboard:** Create/manage exams, track performance with analytics, and display results.
- **Student Dashboard:** Take exams, view results, and track progress.
- **Exam Formats:** Objective questions (automatically graded) and subjective questions (manually graded).
- **Performance Analytics:** Graphs and reports showing progress trends and comparisons with class averages.
- **Notifications:** Alerts for upcoming exams and results.
- **Authentication & Authorization:** Secure login system for students, teachers, and admins using role-based access control (RBAC) and Json Web Tokens(JWT) to ensure only authorized users can access certain functionalities.
- **Link**-Enter here

Process Flow Chart for students

```
Student  →  Login  →  Homepage  →  Academic  →  PDF download of books

Student  →  Signup  →  Login

Homepage  →  Exam schedule for the year

Homepage  →  Examination  →  Results
```

Student → Signup
Signup → Login
Homepage → Academic
Academic → PDF download of books
Homepage → Exam schedule for the year
Homepage → Examination
Examination → Results

Process Flow Chart for Teachers

Teacher → Login → Homepage

Homepage → Examination
Examination → Result checking
Examination → Upload Exam paper
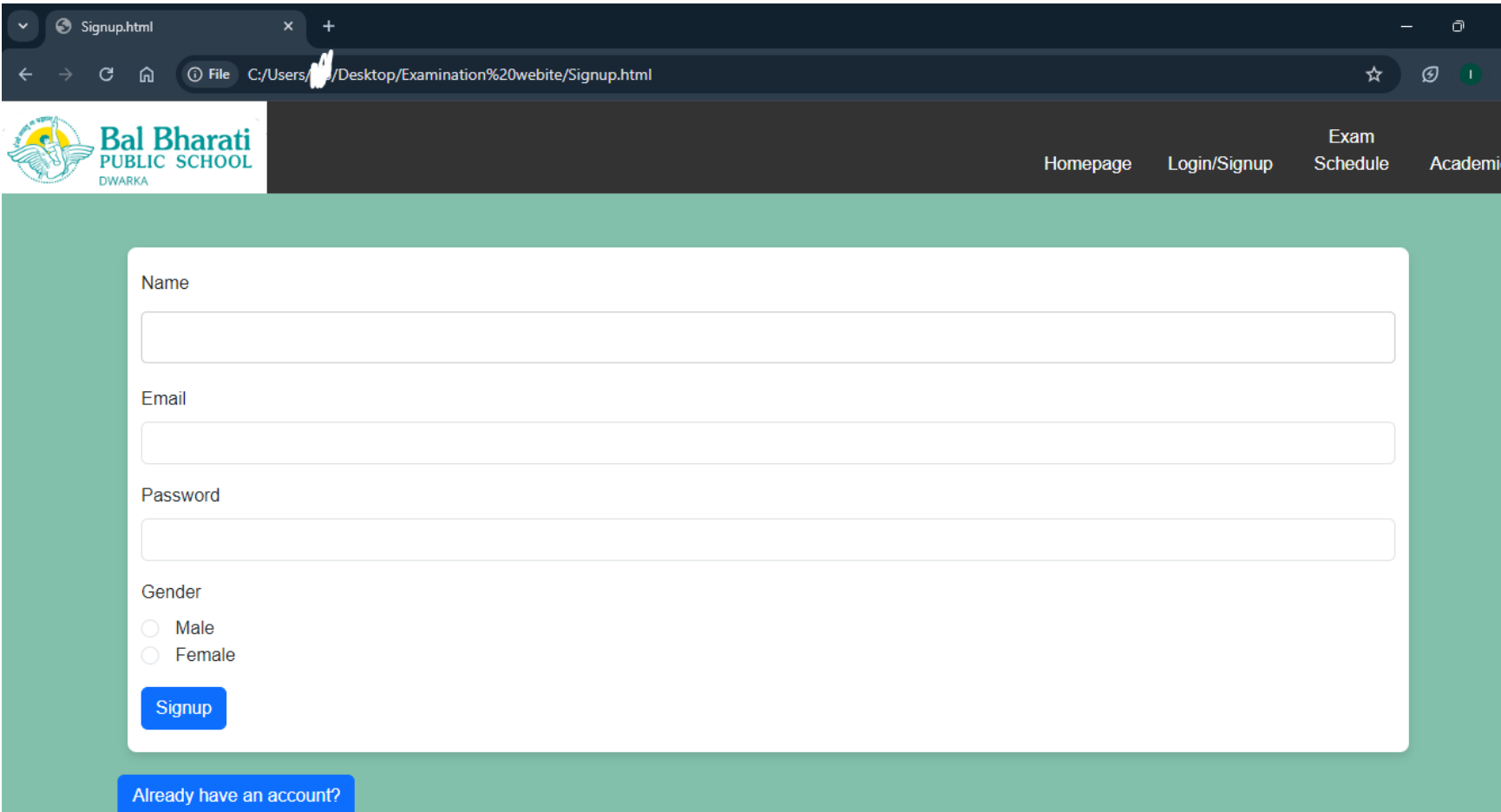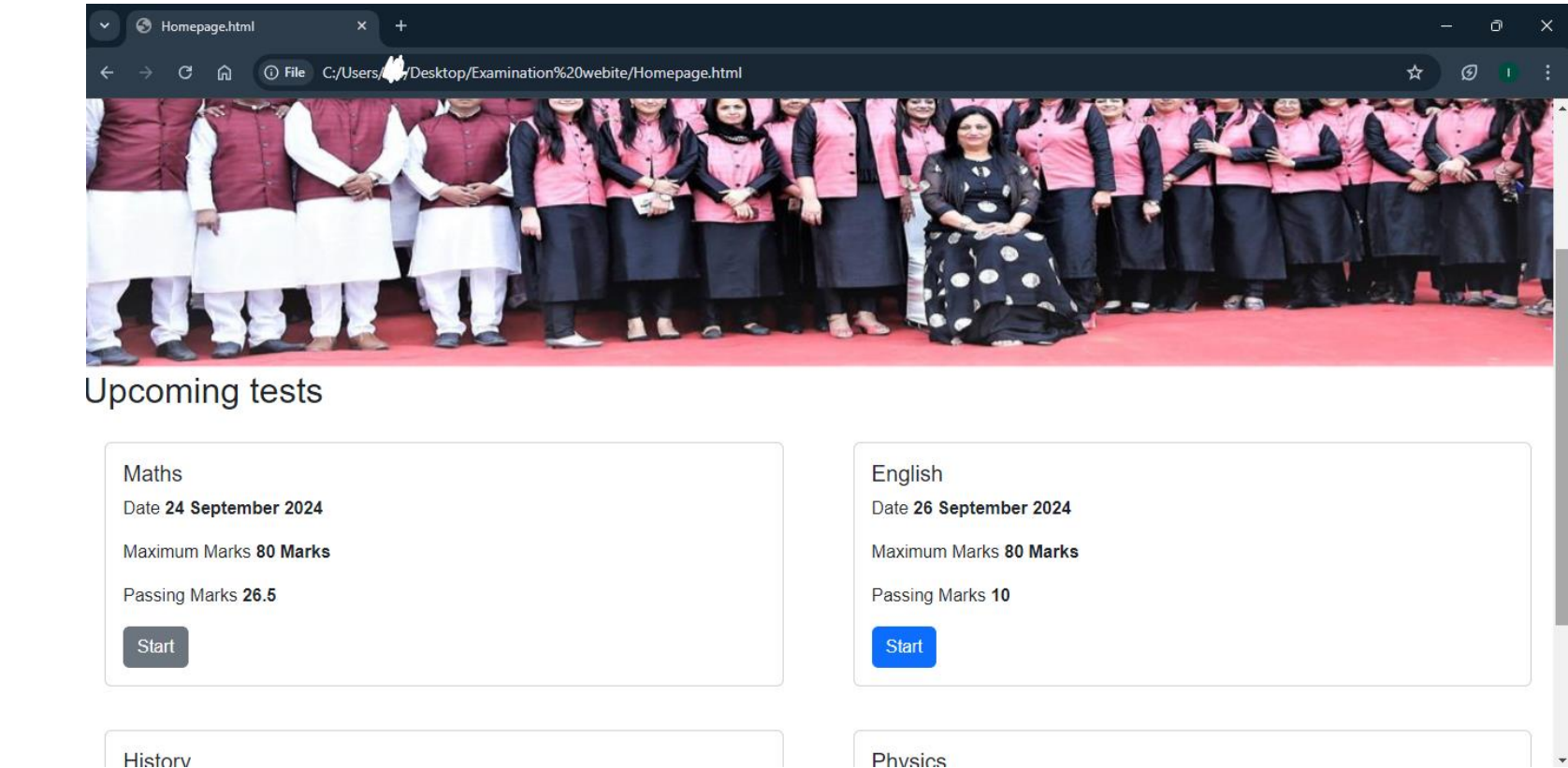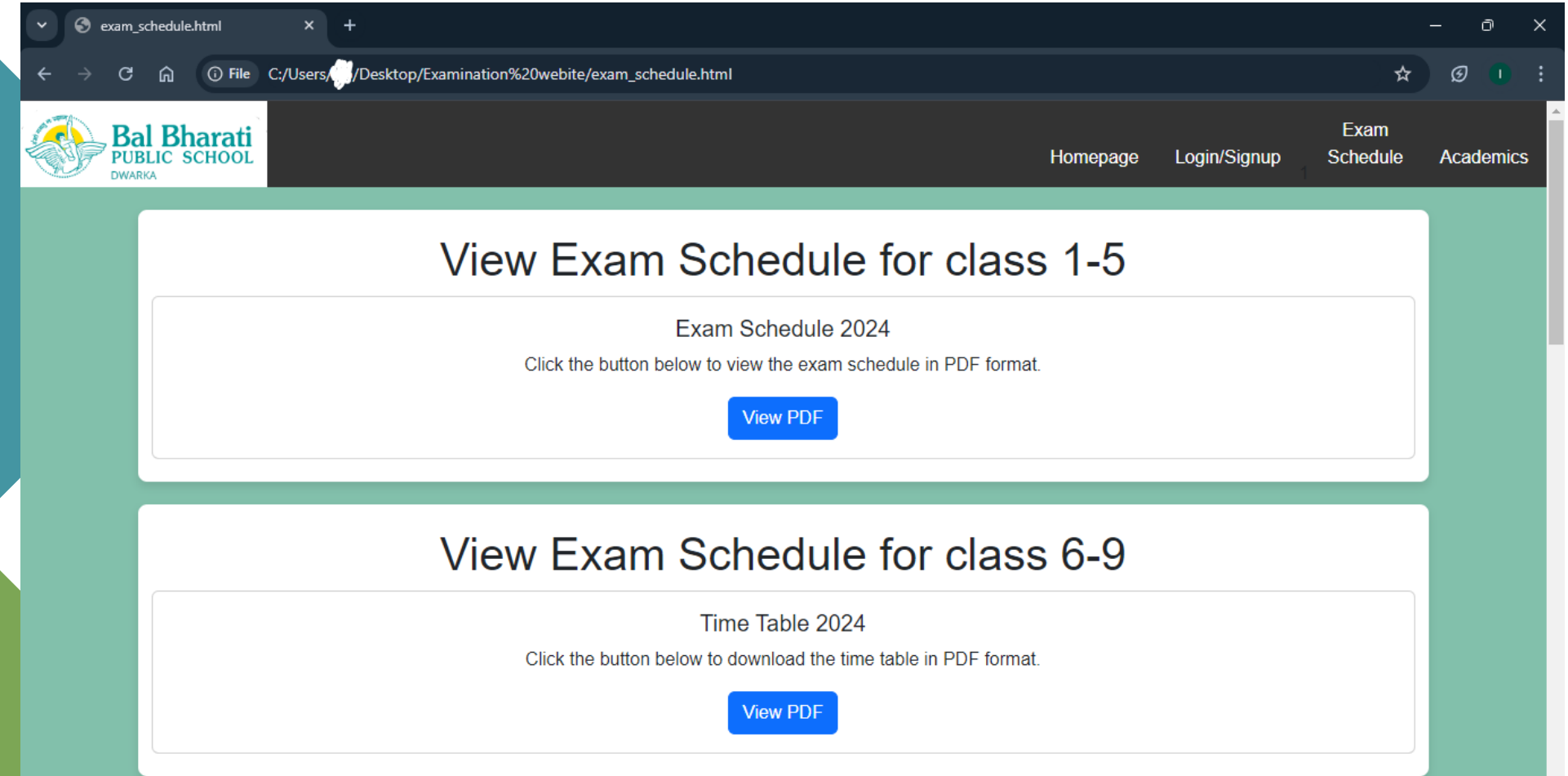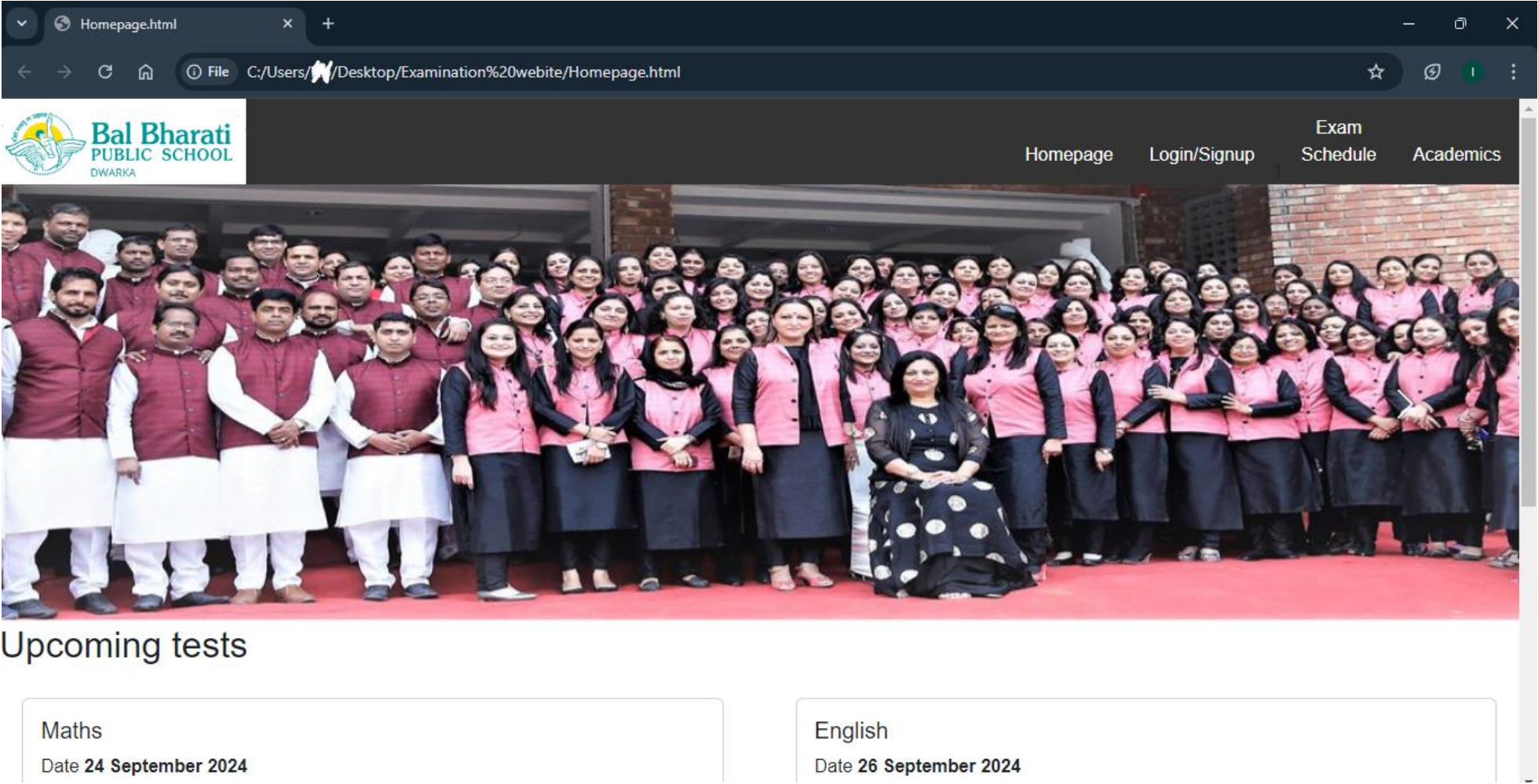Homepage → Results

Description of our technology stack

Front end-For the front end of the website we are using HTML, CSS and JS

1. HTML- HTML stands for HyperText Markup Language. It is being used to give a basic structure and a generic look to webpages. It also helps web browsers display webpages

2. CSS- CSS also known as Cascading Style Sheets is used to make a webpage look pretty and nice. In my web page I have used bootstrap CSS which is one of the best custom CSS available on the internet.

3. JS- JS stands for Java script. In my webpage it will be used in the backend(Node.js) and it helps me on the main website by preventing users from inputing invalid data for forms and downloading/opening pdfs.

Backend- For the backend of this website I have decided to use Node.js for running a real time java script server and python with Flask, Requests and Web Browser installed as additional packages. This allows for a seamless connection between the server and client with near zero latency on our end.

Screenshots

Idea/Approach Details

Description of our use cases

1. User Registration
Actors: Student, Teacher
Users register by providing name, email, username, and password.

2. User Login
Actors: Student, Teacher
Users log in with their credentials.

3. Create Exam
Actors: Teacher
Teachers create an exam by entering details.

4. View Exams
Actors: Student
Students view available exams.

5. Take Exam
Actors: Student
Students answer questions and submit the exam.

6. View Results
Actors: Student
Students view their scores and feedback.

7. Provide Feedback
Actors: Teacher
Teachers give feedback on exams.

8. View Submissions
Actors: Teacher
Teachers view student submissions.

9. Update Profile
Actors: Student, Teacher
Users update profile details.

10. Access Study Materials
Actors: Student
Students download study materials.

11. Analytics Dashboard
Actors: Teacher
Teachers view student performance data.

12. Notification Alerts
Actors: Student, Teacher
Users receive notifications for important updates.

Idea/Approach Details

Description of our Dependencies and Show stopper

Financial Dependency -
Development Costs: Building the exam portal needs an initial investment to hire security experts.

Ongoing Maintenance: There are regular costs for updates, fixing bugs, and improving features to keep the portal secure and running well.

Technical Dependency -
Front-End: The portal's user interface uses tools like Bootstrap CSS to ensure it works well on different devices.

Back-End: Technologies like Node.js or Flask handle the data, security, and performance behind the scenes.

Show stopper
AI-Driven Question Generation
AI-Driven Question Generation Uses AI to create new questions based on existing materials, ensuring a fresh and relevant exam experience.

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Team Member Details

Student's Details

SL	Student ID	Name	Class	DOB	Email	Phone Number	Gender
1		Ishan Sinha	9	23/02/2011	ruchitasinha77@gmail.com	9650011657	Male
2		Khyati Singh	9	18/03/2011	Khyatigarima@gmail.com	8527252659	Female
3		Yakshit Yadav	9	18/08/2010	yyp2622@gmail.com	7048989191	Male
4		Tejas Tyagi	9	22/6/2010	tyagitejas777@gmail.com	8826839531	Male
5							

Mentor Details

SL	Name	UID	Address	DOB	Email	Phone Number	Gender
1	Prachi Kumari		G-120 Gali no. 8 Vishwas Park, Uttam Nagar New Delhi	12/05/2004	kprachi.link@gmail.com	8810687748	Female