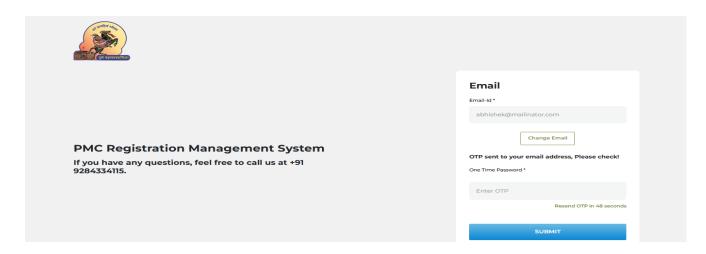
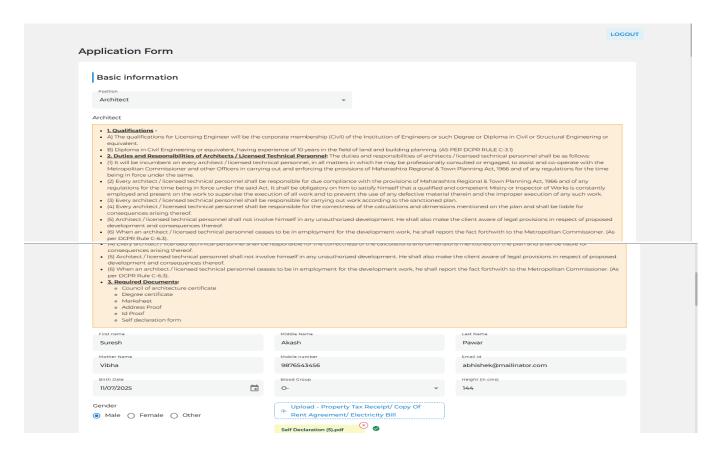
### **Detailed Workflow Document**

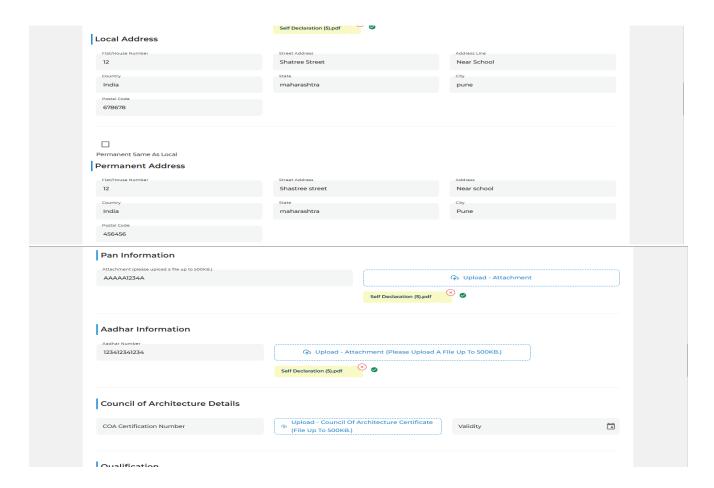
# 1. User Login and Application Form

1. The user logs into the application through **OTP authentication**.

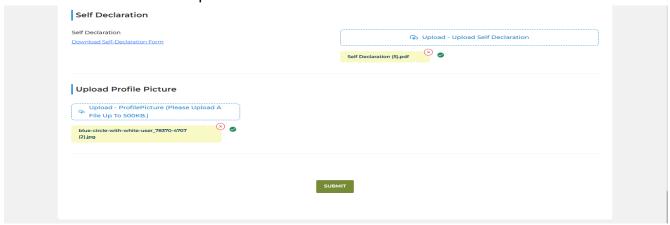


2. Once the OTP is successfully verified, the system displays the **Application Form**.





3. The user fills in all required details in the form.



4. Upon submission, the application is routed to the **Junior Engineer (based on position selected)**.

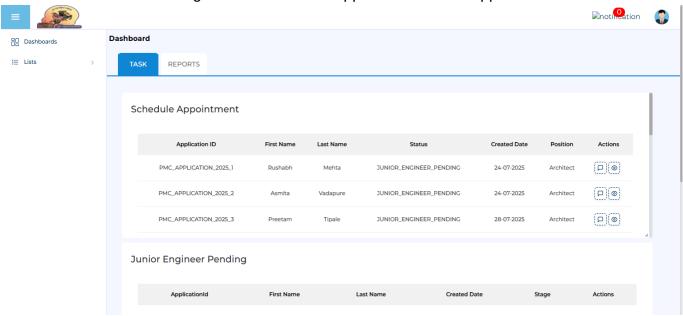
## 2. Routing Based on Position Selection

- The application is directed to a **specific Junior Engineer** depending on the applicant's chosen role from the dropdown menu:
  - Architect → Junior Engineer (Architect)
  - o **Structural Engineer** → Junior Engineer (Structural)
  - o **Licence Engineer** → Junior Engineer (Licence)
  - o **Supervisor 1** → Junior Engineer (Supervisor 1)
  - o **Supervisor 2** → Junior Engineer (Supervisor 2)

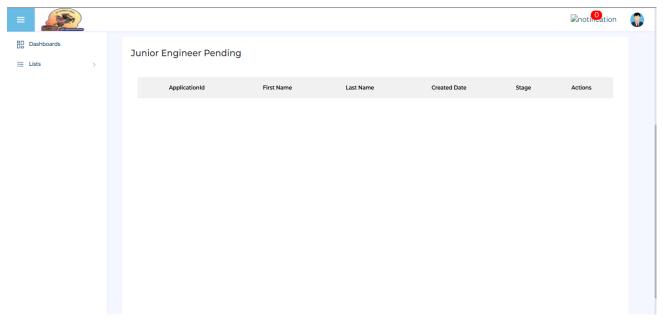
### 3. Junior Engineer Tasks

Task 1: Schedule Appointment

The Junior Engineer schedules an appointment for the applicant.



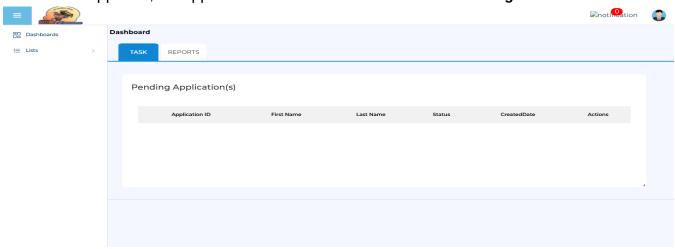
- Task 2: Document Verification
  - o The Junior Engineer confirms and verifies the applicant's documents.



• Once completed, the application is forwarded to the **Assistant Engineer**.

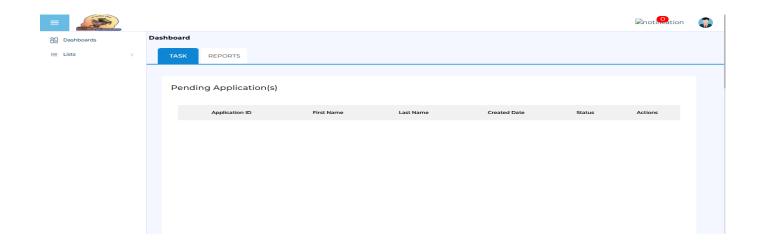
## 4. Assistant Engineer Tasks

- The Assistant Engineer reviews the application and approves it.
- After approval, the application moves forward to the **Executive Engineer**.



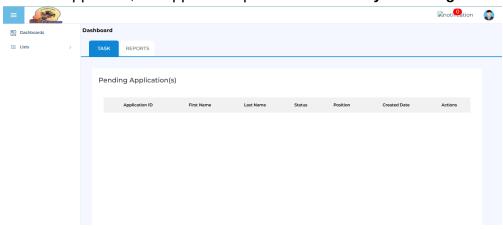
# 5. Executive Engineer Tasks (Stage 1)

- The Executive Engineer reviews the submitted application.
- Once verified, the Executive Engineer approves it.
- The application is then routed to the City Engineer.



# 6. City Engineer Tasks (Stage 1)

- The City Engineer performs a final review.
- If approved, the application proceeds to the **Payment Stage**.

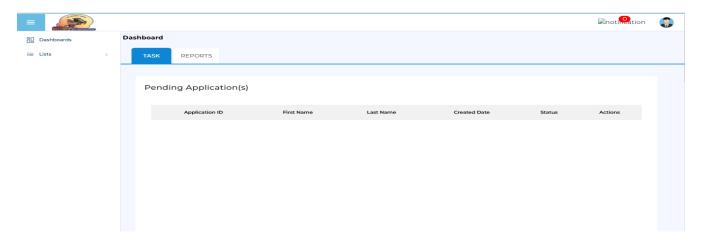


# 7. User Payment Process

- The user makes the required payment using Easebuzz Payment Gateway.
- Upon successful payment:
  - o **Certificate** is generated.
  - o Challan is generated

### 8. Clerk Tasks

- The Clerk reviews and approves the application post-payment.
- The application then proceeds to the Executive Engineer (Stage 2).



# 9. Executive Engineer Tasks (Stage 2)

- The Executive Engineer digitally signs the certificate using **HSM Digital Signature System**.
- The application moves forward to the City Engineer (Stage 2).

# 10. City Engineer Tasks (Stage 2)

- The City Engineer applies their digital signature using the **HSM system**.
- Once done, the **final certificate** is issued to the applicant.

### 11. Certificate Issuance and Download

- The user can log in through **Guest Login**.
- The user downloads:
  - Final Certificate
  - o **Recommended Form** (generated at application submission)
  - o Challan (generated on successful payment)

#### 12. Notifications

 At each action or task completion stage, the system sends a status update email to the user.

#### 13. Document Generation Flow

- Recommended Form → Generated upon application submission.
- **Certificate** → Generated upon **successful payment**, signed after approvals.
- Challan → Generated upon successful payment.

### 14. Systems Used

- Easebuzz Payment Gateway → Handles secure online payment.
- HSM Digital Signature System → Ensures valid and secure digital signatures of officers.

## **End-to-End Flow Summary**

 User Login (OTP) → Application Form Submission → Role-based Junior Engineer Task (Schedule & Verify) → Assistant Engineer Approval → Executive Engineer Approval (Stage 1)  $\rightarrow$  City Engineer Approval (Stage 1)  $\rightarrow$  User Payment (Easebuzz)  $\rightarrow$  Clerk Approval  $\rightarrow$  Executive Engineer Digital Signature  $\rightarrow$  City Engineer Digital Signature  $\rightarrow$  Final Certificate Issued  $\rightarrow$  User Guest Login Download (Certificate + Recommended Form + Challan).