### 1. Tool Name: **Online Permit-to-Work System**

### 2. Language

**Frontend**: React.js  
**Backend**: Node.js with Express (or Firebase for Backend as a Service)  
**Database**: Firebase Firestore  
**Notification Service**: Firebase Functions and SendGrid/Mailgun for emails

### 3. Date of Start: **25th July, 2024**

### 4. Date of Completion: **3rd August, 2024**

### 5. Platform and Space

**Platform**: Web Application  
**Hosting**: Vercel (Free Hosting Platform)  
**Storage**: Firebase Firestore for database, Firebase Storage for files, Email Service for notifications

### 6. Cost Estimate

### We will first use the trial version (free) of the email service provider to test the usage of the application

|  |  |  |
| --- | --- | --- |
| **Item** | **Description** | **Estimated Cost** |
| **Email Service (SendGrid / Mailgun)** | We will use Email service provider API | Rs. 2000-2500 monthly for 2000 mails |

### Development Plan with Dates

|  |  |  |
| --- | --- | --- |
| **Date Range** | **Task** | **Deliverables** |
| **July 25 - July 26** | Project Initialization, Setup, and Planning | Project structure, basic components (Navbar, Footer) |
| **July 27 - July 28** | Develop Main Pages (Home, Login) | Functional Home and Login pages |
| **July 29 - July 30** | Permit Management: Implement Permit Form, Permit List, Permit Details Pages | Functional forms and list for managing permits |
| **July 31 - August 1** | Develop Admin Dashboard | Functional admin dashboard with permit and user management |
| **August 2** | Implement Notification System (email notifications for approvals) | Functional email notification system |
| **August 3** | Final Testing and Deployment Preparation | Tested and ready-to-deploy application |

### Specifications

1. **User Roles**: Different roles (Initiator, Supervisor, Authorized Personnel, Admin) with specific access and functionalities.
2. **Permit Workflow**: End-to-end permit management, including creation, approval, and status tracking.
3. **Notification System**: Email notifications for approvals and status updates with approve/reject options.
4. **Admin Dashboard**: Comprehensive dashboard for managing permits, users, and generating reports.
5. **Responsive Design**: Ensure compatibility across various devices and screen sizes.
6. **Security Measures**: Role-based access control, secure authentication, and data protection.