# School of Computing

# SRM IST, Kattankulathur – 603 203

**Course Code: 18CSC206J**

**Course Name: Software Engineering and Project Management**

| | |
|---|---|
| **Experiment No** | 4 |
| **Title of Experiment** | Prepare Project Plan based on scope, Calculate Project effort based on resources and Job roles and responsibilities |
| **Name of the candidate** | AKASH THAKUR |
| **Team Members** | HARSHIT , UDAY TEKCHANDANI |
| **Register Number** | 03,07,13 |
| **Date of Experiment** | 20-2-23 |

## Mark Split Up

| S.No | Description | Maximum Mark | Mark Obtained |
|---|---|---|---|
| 1 | Exercise | 5 | |
| 2 | Viva | 5 | |
| | **Total** | **10** | |

**Staff Signature with date**

**Aim**

      To Prepare Project Plan based on scope, Calculate Project effort based on resources, Find Job roles and responsibilities

**Team Members:**

| Sl No | Register No | Name | Role |
|-------|-------------|------|------|
| 1 | RA2111031010007 | HARSHIT | Lead |
| 2 | RA2111031010013 | AKASH THAKUR | Member |
| 3 | RA2111031010003 | UDAY TEKCHANDANI | Member |

# 1. Project Management Plan

Describe the key issues driving the project. **[Min 3 Focus Areas]**

| Focus Area | Details |
|------------|---------|
| Scope Management | Scope Statement<br>Requirement Management (Gathering, Control, Assumption, Constraint Stakeholder)<br>Define Deliverable<br>Requirement Change Control<br>Activities and Sub-Tasks |
| Schedule Management | Define Milestones :<br>1) Understanding project: Identifying goals and approach to the project.<br>2) Identification of Requirement: Funcon, Non functional and User Requirements<br>3) Project Management: Cost estimation, Risk Analysis, Project Timeline<br>4) Designing: Designing UI, review and revising<br>5) Developing Front-end: Coding the front-end part<br>6) Developing Back-end: Coding the functional elements, creating database, debugging and testing<br>7) Deployment: Deploying the website and giving it a domain.<br><br>Schedule Control |
| Stakeholder | Internal Stakeholders:<br>1. Project Manager<br>2. Technical Lead<br>3. Business Analyst |

| | |
|---|---|
| | **4.** developer |
| | 5. tester |
| | external stakeholders: |
| | 1. customer |
| | 2.supplier |
| | 3.shareholder |
| | 4.creditor |
| **Risk management** | **risks identified:** |
| | **1.**system crash |
| | 2.corrupt |
| | 3.server breakdown |
| | 4.other commitments |
| | 5.lack of initial interest in the project |
| | 6.lack of commitment from developer |

## 2. Estimation

### 2.1. Effort and Cost Estimation

| Activity Description | Sub-Task Description | Effort (in hours) | Cost in INR |
|---|---|---|---|
| Website Development | To create a website using HTML, CSS and Javascript | 60 | 30000 |
| Research and Development | To create a website using HTML, CSS and Javascript | 4 | 2000 |
| Website Maintenance | Weekly application maintenance check of data | 10 | 5000 |
| Weekly application maintenance check of data | Weekly application maintenance check of data | 12 | 6000 |

| EFFORT | COST |
|--------|------|
| 1      | 500  |

## 2.2.    Infrastructure/Resource Cost [CapEx]

| Infrastructure Requirement | Qty | Cost per qty |
|----------------------------|-----|--------------|
| Laptops/machines           | 2   | 80,000       |
| Data infrastructure        | 1   | 2000         |
| Network                    | 1   | 1000         |

## 2.3    Maintenance and Support Cost [OpEx]

| Category        | Details                                                      | Qty | Cost per qty per annum | Cost per item |
|-----------------|--------------------------------------------------------------|-----|-------------------------|---------------|
| People          | Network, System, Middleware and DB admin Developer , Support Consultant | 3   | 3,000,000               | 9,000,000     |
| License         | Operating System Database Middleware IDE                     | 10  | 10000                   | 100,000       |
| Infrastructures | Server, Storage and Network                                  | 20  | 10000                   | 200,000       |

# 1. Project Team Formation

## 3.1 Identification Team members

| Name              | Role                            | Responsibilities                        |
|-------------------|---------------------------------|-----------------------------------------|
| FINE MECHANIC     | Key Business User (Product Owner) | Provide clear business and user requirements |
| AKASH THAKUR      | Project Manager                 | Manage the project                      |
| AKASH THAKUR      | Technical Lead                  | Design the end-to-end architecture      |
| UDAY TEKCHANDANI  | UX Designer                     | Design the user experience              |

| UDAY TEKCHANDANI | Frontend Developer | Develop user interface |
|---|---|---|
| HARSHIT | Backend Developer | Design, Develop and Unit Test Services/API/DB |
| HARSHIT | Tester | Define Test Cases and Perform Testing |

## 3.2 Responsibility Assignment Matrix

| RACI Matrix | Team Members | | | |
|---|---|---|---|---|
| Activity | HARSHIT (BA) | UDAY (Developer) | AKASH(Project Manager) | Key Business User |
| User Requirement Documentation | A | C/I | I | R |
| project mangement | R | C/I | A | I |
| designing | R | A | C/I | I |
| cost/effort estimation | A | C | I | R |
| development | C/I | R | R/A | A |

| A | Accountable |
|---|---|
| R | Responsible |
| C | Consult |
| I | Inform |

## Reference

1. https://www.pmi.org/
2. https://www.projectmanagement.com/
3. https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/ti-it/ervcpgpm-dsfvpmpt-eng.html

Result:

Thus, the Project Plan was documented successfully.

# 2. Project Management Plan

Describe the key issues driving the project. **[Min 3 Focus Areas]**

| Focus Area | Details |
|---|---|
| Integration Management | Governance Framework<br>Project Team Structure<br>Roles & Responsibilities of Team<br>Change Management<br>(Change Control, Issue Management)<br>Project Closure |
| Scope Management | Scope Statement<br>Requirement Management (Gathering, Control, Assumption, Constraint Stakeholder)<br>Define Deliverable<br>Requirement Change Control<br>Activities and Sub-Tasks |
| Schedule Management | Define Milestones<br>Schedule Control |

| | |
|---|---|
| Cost Management | Estimate Effort<br>Assign Team<br>Budget Control |
| Quality Management | Quality Assurance: Quality assurance will be managed including governance, roles and responsibilities, tools and techniques and reporting<br>Quality Control: Specify the mechanisms to be used to measure and control the quality of the work products |
| Resource Management | Estimate and Manage the need<br>People: People & Skills Required<br>Finance: Budget Required<br>Physical: Facilities, IT Infrastructure |
| Stakeholder | Identifying, Analyzing, Engaging Stakeholders |
| Communication Management | Determine communication requirements, roles and responsibilities, tools and techniques. [Type of Communication, Schedule, Mechanism Recipient] |
| Risk Management | Identifying, analysing, and prioritizing project risks |
| Procurement Management | Adhering to organization procurement process |

## 3. Estimation

### Effort and Cost Estimation

| Activity Description | Sub-Task | Sub-Task Description | Effort (in hours) | Cost in INR |
|---|---|---|---|---|
| Design the user screen | E1R1A1T1 (Effort-Requirement-Activity-Task) | Confirm the user requirements (acceptance criteria) | 3 | |
| | E1R1A1T2 | | | |
| | E1R1A1T3 | | | |
| Identify Data Source for displaying units of Energy Consumption | | Go through Interface contract (Application Data Exchange) documents | 5 | |
| | | Document | | |

| Effort (hr) | Cost (INR) |
|---|---|
| 1 | 500 |

## Infrastructure/Resource Cost [CapEx]

< OneTime Infra requirements >

| Infrastructure Requirement | Qty | Cost per qty | Cost per item |
|---|---|---|---|
| IR1 | | | |
| IR2 | | | |
| | | | |

## 2.3　Maintenance and Support Cost [OpEx]

| Category | Details | Qty | Cost per qty per annum | Cost per item |
|---|---|---|---|---|
| People | Network, System, Middleware and DB admin<br><br>Developer , Support Consultant | 3 | 2,000,000 | 6,000,000 |
| License | Operating System Database Middleware IDE | 10 | 10000 | 100,000 |
| Infrastructures | Server, Storage and Network | 20 | 20000 | 400,000 |

## 4. Project Team Formation

### Identification Team members

| Name | Role | Responsibilities |
|---|---|---|
| FINE MECHANIC | Key Business User (Product Owner) | Provide clear business and user requirements |
| AKASH THAKUR | Project Manager | Manage the project |
| AKASH THAKUR | Technical Lead | Design the end-to-end architecture |
| UDAY TEKCHANDANI | UX Designer | Design the user experience |
| UDAY TEKCHANDANI | Frontend Developer | Develop user interface |
| HARSHIT | Backend Developer | Design, Develop and Unit Test Services/API/DB |
| HARSHIT | Tester | Define Test Cases and Perform Testing |

### Responsibility Assignment Matrix

| RACI Matrix | Team Members |
|---|---|

| Activity | HARSHIT (BA) | UDAY (Developer) | AKASH(Project Manager) | Key Business User |
|---|---|---|---|---|
| User Requirement Documentation | A | C/I | I | R |
| project mangement | R | C/I | A | I |
| designing | R | A | C/I | I |
| cost/effort estimation | A | C | I | R |
| development | C/I | R | R/A | A |

| A | Accountable |
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## Reference

4. https://www.pmi.org/
5. https://www.projectmanagement.com/
6. https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/ti-it/ervcpgpm-dsfvpmpt-eng.html