INSY6212\_A2

Question 2

Key

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| --- | --- | --- | --- | --- |
| WBS | Task Name | Resource Names | Cost | Milestone |
| **0** | **Emergency SOS System** |  | **R1 406 000,00** | **No** |
| **1** | **Planning And Analysis** |  | **R174 800,00** | **No** |
| 1.1 | Identify Problem | Project Manager | R6 400,00 | No |
| 1.2 | Identify Stakeholders | Project Manager | R6 400,00 | No |
| **1.3** | **Identify Requirements** |  | **R74 400,00** | **No** |
| 1.3.1 | Identify Functional Requirements | Full Stack Developer, Security Engineer, Systems Architect | R38 400,00 | No |
| 1.3.2 | Identify Non-Functional Requirements | Designer, Frontend Developer, Systems Architect | R36 000,00 | No |
| 1.4 | Define Project Scope | Project Manager | R9 600,00 | No |
| **1.5** | **Plan Resources** |  | **R44 000,00** | **No** |
| 1.5.1 | Hire Staff | Project Manager | R22 400,00 | No |
| 1.5.2 | Plan Equipment | Systems Architect | R12 000,00 | No |
| 1.5.3 | Plan Rates | Project Manager | R9 600,00 | No |
| **1.6** | **Create Project Plan** |  | **R34 000,00** | **No** |
| 1.6.1 | Draft Project Plan | Systems Architect, Project Manager | R22 400,00 | No |
| 1.6.2 | Liaison With Community And Update Plan To Feedback | Community Testers[1], Project Manager | R11 600,00 | Yes |
| **2** | **Designing** |  | **R242 400,00** | **No** |
| **2.1** | **Create Diagrams** |  | **R28 800,00** | **No** |
| 2.1.1 | Use Case Diagram | Designer, Systems Architect | R9 600,00 | No |
| 2.1.2 | UML Class Diagram | Designer, Systems Architect | R9 600,00 | No |
| 2.1.3 | Activity Diagram | Designer, Systems Architect | R9 600,00 | No |
| 2.2 | Design User Interface | Designer, Frontend Developer | R33 600,00 | No |
| 2.3 | Design Database | Database Administrator | R16 800,00 | No |
| 2.4 | Design Backend Architecture | Backend Developer, Full Stack Developer | R42 000,00 | No |
| 2.5 | Design Network Architecture and Internet Connection | Network Engineer, Security Engineer | R56 000,00 | No |
| 2.6 | Ensure Encryption Standard Is Set And Security Practices Are Designed for | Security Engineer | R20 000,00 | No |
| 2.7 | Ensure Application Complies with Laws | Project Manager | R9 600,00 | No |
| **2.8** | **Design Documentation** |  | **R35 600,00** | **No** |
| 2.8.1 | Create Design Documentation | Designer, Systems Architect | R24 000,00 | No |
| 2.8.2 | Liaison With Community And Update Design To Feedback | Community Testers[1], Project Manager | R11 600,00 | Yes |
| **3** | **Development** |  | **R471 600,00** | **No** |
| **3.1** | **Database Development** |  | **R34 400,00** | **No** |
| 3.1.1 | Create DB and Tables | Database Administrator | R16 800,00 | No |
| 3.1.2 | Add Constraints | Database Administrator | R7 200,00 | No |
| 3.1.3 | Insert Test Data | Database Administrator | R4 800,00 | No |
| 3.1.4 | Merge DB with Main Development Branch After Approval | Database Administrator, Full Stack Developer | R5 600,00 | Yes |
| **3.2** | **Backend Development** |  | **R153 200,00** | **No** |
| 3.2.1 | Create Classes | Backend Developer | R28 000,00 | No |
| 3.2.2 | Create Exceptions | Full Stack Developer | R12 800,00 | No |
| 3.2.3 | Structure Logic | Backend Developer, Systems Architect | R52 000,00 | No |
| 3.2.4 | Connect to DB | Full Stack Developer | R6 400,00 | No |
| 3.2.5 | Connect to Emergency Service Provider Contacts | Backend Developer | R14 000,00 | No |
| 3.2.6 | Enable Emergency Notification Contacts | Backend Developer | R8 400,00 | No |
| 3.2.7 | Integrate With Cross Platform API | Full Stack Developer | R28 800,00 | Yes |
| 3.2.8 | Merge Backend with Main Development Branch After Approval | Backend Developer | R2 800,00 | Yes |
| **3.3** | **Frontend Development** |  | **R36 000,00** | **No** |
| 3.3.1 | Connect to Backend | Full Stack Developer | R6 400,00 | No |
| 3.3.2 | Develop Layout | Designer, Frontend Developer | R14 400,00 | No |
| 3.3.3 | Create Navigation | Frontend Developer | R4 800,00 | No |
| 3.3.4 | Validate Inputs | Frontend Developer | R7 200,00 | No |
| 3.3.5 | Merge Frontend with Main Development Branch After Approval | Full Stack Developer | R3 200,00 | Yes |
| **3.4** | **Networking** |  | **R192 000,00** | **No** |
| 3.4.1 | Implement Servers | Network Engineer, Server[1] | R128 000,00 | No |
| 3.4.2 | Ensure Redundancy And Proper Encryption is In Place | Security Engineer | R20 000,00 | No |
| 3.4.3 | Connect Application to Internet | Network Engineer | R12 000,00 | No |
| 3.4.4 | Enable GeoLocation and Ability to Share Location to Emergency Provider | Full Stack Developer | R32 000,00 | No |
| 3.5 | Finalise Development | Full Stack Developer, Network Engineer, Security Engineer | R56 000,00 | Yes |
| **4** | **Testing** |  | **R221 200,00** | **No** |
| **4.1** | **Alpha Testing** |  | **R50 000,00** | **No** |
| 4.1.1 | Unit Testing | Backend Developer | R14 000,00 | No |
| 4.1.2 | Integration Testing | Full Stack Developer | R16 000,00 | No |
| 4.1.3 | Penetration Testing | Security Engineer | R20 000,00 | No |
| **4.2** | **Beta Testing** |  | **R52 000,00** | **No** |
| 4.2.1 | Get Beta Users From a Select Group In Community | Project Manager | R32 000,00 | No |
| 4.2.2 | Beta Users Test System and Gain Feedback | Community Testers[10] | R20 000,00 | No |
| 4.3 | Fix Issues found | Full Stack Developer, Network Engineer, Security Engineer | R112 000,00 | No |
| 4.4 | Finalise First Iteration of Program | Systems Architect | R7 200,00 | Yes |
| **5** | **Deployment** |  | **R296 000,00** | **No** |
| 5.1 | Stage Deployment | Deployment Engineer | R12 000,00 | No |
| **5.2** | **Migrate Systems** |  | **R151 200,00** | **No** |
| 5.2.1 | Migrate Data to Databases | Database Administrator | R9 600,00 | No |
| 5.2.2 | Implement New System | Backend Developer, Frontend Developer, Full Stack Developer, Network Engineer, Security Engineer | R65 600,00 | No |
| 5.2.3 | Beta Deploy | Deployment Engineer | R12 000,00 | No |
| 5.2.4 | Gain Feedback And Update | Full Stack Developer | R64 000,00 | No |
| 5.3 | Deploy To Public | Deployment Engineer | R16 800,00 | Yes |
| 5.4 | Monitor And Maintain Application | Backend Developer, Full Stack Developer, Security Engineer | R100 000,00 | No |
| 5.5 | Document Program For Maintenance And Update | Project Manager | R16 000,00 | Yes |

WBS