**System Development and Operation**

**Overview**

The system development is performed using Agile methodology. Initial R&D activity should be

applied to experiments tools and techniques. Later continuous R&D activity will run beside the

system development activities. The first version of the system should take 12week. After

release, the system will enter an initial operation phase for four weeks. During that phase the

whole development team will communicate directly with the operation and business team.

Later the system will enter the final operation and maintenance phase. During that phase a

minor development team will provide an indirect technical support.

**Development Plan**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Study Requirements |  |  |  |  |  |  |  |  |  |  |  |  |
| Management Planning |  |  |  |  |  |  |  |  |  |  |  |  |
| Preparation |  |  |  |  |  |  |  |  |  |  |  |  |
| Test Planning |  |  |  |  |  |  |  |  |  |  |  |  |
| Implementation |  |  |  |  |  |  |  |  |  |  |  |  |
| Research |  |  |  |  |  |  |  |  |  |  |  |  |
| Testing |  |  |  |  |  |  |  |  |  |  |  |  |
| System Testing |  |  |  |  |  |  |  |  |  |  |  |  |
| Final Release |  |  |  |  |  |  |  |  |  |  |  |  |

**Operation Plan**

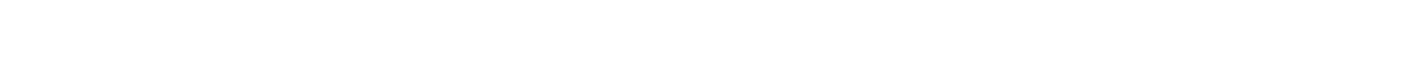
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 10 weeks later |
| Marketing |  |  |  |  |  |
| Operation |  |  |  |  |  |
| Maintainance |  |  |  |  |  |

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Full time allocation of team members. Small team or part time allocation.

**Team**



|  |  |  |  |
| --- | --- | --- | --- |
| Team | Role | # |  |
| Documentation team | Team leader | 1 |  |
|  |  |  |  |
|  | Team Members | 3 |  |
|  |  |  |  |
| Front-End & UX Team | Team Leader | 1 |  |
|  |  |  |  |
|  | Team Members | 3 |  |
|  |  |  |  |
| Back-End Team | Team leader | 1 |
|  |  |  |
|  | Team Members | 3 |
|  |  |  |

**Tools**

TechFix will be developed using open source tools, languages and servers. Commercial tools will be used in case there is no open source alternative. This will decrease the cost especially for long term operation.

While development only online tools will be used for management, tracking, testing and source control. This will increase the collaboration between team members even they are not located at the same place. Also, this will allow external teams and members to participate.

|  |  |
| --- | --- |
| Operation | Recommended Tool |
|  |  |
| Source Control and Versioning | GitHub/Git |
|  |  |
| Tasks and Issues Tracking | GitHub |
|  |  |
| Structured Database | MySQL |
|  |  |
| Unstructured Database | MongoDB, HIVE, HBASE ... |
|  |  |
| Data Indexing Server | Elasticsearch, Solr ... |
|  |  |
| Programming Languages | HTML , CSS , Java Script , PHP Native . |
|  |  |
| Operating Systems | Linux (Centos/Ubuntu) ...  Windows (Commercial, Single License) |
|  |  |
| Documents | Google Docs ... |
|  |  |
| Host Management | WHM/cPanel (Commercial, Single License) |
|  |  |
| Planning | MS Project (Commercial, Single License) ... |
|  |  |
| Software SRS/SDA/SDD | Visio (Commercial, Single License) ... |
|  |  |
| UX Design | Adobe UX Tools (Commercial, Single License) ... |
|  |  |

**Infrastructure**

TechFix system requires multiple infrastructures for development and production. Know that personal computers of all members is included with their monthly cost.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type | Name | # |  |  |
|  |  |  | |  |
| Development and Testing | Mobiles and Tablets | 2 Physical + 6 Virtual | |  |
| Infrastructure |  |  |  |  |
| Online Development Server (Virtual) | 2 | Servers |  |
|  |  |
|  |  |  |  |  |
|  | Local Backup Server | 1 | Server |  |
|  |  |  | |  |
| Initial Production | Mobiles and Tablets | 2 Physical + 10 Virtual | |  |
| Infrastructure |  |  |  |  |
| Online Production Server (Physical) | 2 | Servers |  |
|  |  |
|  | 3 Application Servers: XEON E7, 8 |  |  |  |
|  | Cores, 128GB RAM, 1TB SSD |  |  |  |
|  | 3 Data Servers (Master + 2 Slaves): |  |  |  |
|  | Same with 5TB |  |  |  |
|  |  |  | |  |
|  | Online Backup Storage | 2 TB | |  |
|  |  |  |  |  |

**Cost**

* **The system completely depend on free open source tools and languages. So there will not be many expenses before the production or launching phase .  
    
  The main cost will be**
  + **Local Backup Server**
  + **Online Production Server**
  + **Online Backup Storage**

**Assumptions**

* The system completely depend on free open source tools and languages.
* The system is not responsible of the quality of the technician it’s only showing his information .
* The system is totally free for users . The profit will be only from advertisements .