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Prepared by:

* Ahmed Khaled Mohana Tohamy.
* Mahmoud Ehab Mahmoud Abdeen.
* Mariam mohamed abd elmonaam ismail.

**Under supervision of**

**DR/Manal showman**

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Requirement document of Bug Tracking System

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# Team members:

|  |  |
| --- | --- |
| Name | Code |
| Ahmed Khaled Mohana Tohamy. | 20026 |
| Mahmoud Ehab Mahmoud Abdeen. | 20010 |
| Mariam Mohamed Abdelmonem Ismail | 20047 |

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1. formal description-Bug Tracking System:
   1. Proposed system:

* purpose of the software is to track bugs and allow the end user to manage bugs and store them if they ever appear in other projects.

1. Requirements document for Bug Tracking system:
   1. Stakeholders:

* End users: Administrator, Developer, Tester.
* Procurer: Software company owner.
  1. Context diagram:

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Figure 1:Context diagram

* 1. Interfaces:

|  |  |  |
| --- | --- | --- |
| Actor | Physical interface | Logical interface |
| Administrator | PC | * **GUI:** * Introduction Page. * Login Page. * Activities Tab (Shows User Activities and Failed Login Attempts tables). * Users Tab (Shows Users Table and allows adding, updating, and deleting users). * Projects Tab (Shows Projects Table and allows creating, editing, and deleting projcts, as well as assigning users to projects). * Bugs Tab (Shows Bugs Table, allows adding bug type and severity, and assigning bugs to developers). |
| Developer | PC | * **GUI:** * welcome screen. * login screen. * Projects screen (shows the table of projects assignment to you and the developers also assigned to the same projects). * Bugs screen (show table of bugs assigned to you – update bug status). * Dashboard screen (current projects that you are assigned on it – current bugs that are assigned to you). |
| Tester | PC | * **GUI:** * Welcome screen. * Login screen. * Projects screen (Show table of current projects – Search on these projects). * Project details screen (Show the testers and developers on the same project). * Bugs screen (show table of bugs in a specific project – Edit bug information). * Dashboard screen (current projects that you are assigned on it – current bugs that are assigned to you). |

1. List of requirements:

|  |  |
| --- | --- |
| Symbol | Description |
| F1 | User logs in. |
| F2 | User requests password reset. |
| F3 | User logs out. |
| F4 | User rates the application. |
| F5 | Administrator views user activity. |
| F6 | Administrator searches through user activities. |
| F7 | Administrator views failed login attempts. |
| F8 | Administrator searches through failed login attempts. |
| F9 | Administrator views users in the system. |
| F10 | Administrator searches through users. |
| F11 | Administrator adds new user. |
| F12 | Administrator edits user information. |
| F13 | Administrator deletes selected user. |
| F14 | Administrator deletes all users in the system. |
| F15 | Administrator views projects in the system. |
| F16 | Administrator searches through projects. |
| F17 | Administrator adds a new project. |
| F18 | Administrator assigns users to project. |
| F19 | Administrator edits project information. |
| F20 | Administrator deletes project. |
| F21 | Administrator views bugs in the system. |
| F22 | Administrator searches through bugs. |
| F23 | Administrator adds bug type and severity. |
| F24 | Administrator assigns bug to developer. |
| F25 | Administrator views ratings. |
| F26 | Administrator rates the software. |
| F27 | Developer Views the list of assigned Bugs. |
| F28 | Developer views information of specific bug. |
| F29 | Developer searches through bugs. |
| F30 | Developer change status of specific bug. |
| F31 | Developer Views the list of assigned projects. |
| F32 | Developer searches through the list of assigned projects. |
| F33 | Developer Resets and edits his information like passwords. |
| F34 | Testers views assigned bugs that needed to be tested |
| F35 | Testers Searches through assigned bugs that needed to be tested |
| F36 | Testers views assigned projects |
| F37 | Testers searches through assigned projects |
| F38 | Testers views users of a specific project |
| F39 | Testers views bugs of a specific project |
| F40 | Testers searches through bugs of a specific project |
| F41 | Testers can report bug. |
| F42 | Testers can update bug details. |
| F43 | Testers can update bug status. |
| F44 | Testers can delete bug. |
| F45 | Testers can view a pie chart of bugs status in specific project. |
| NF1 (Efficiency) | Each function should be completed in 0.5 sec. |
| NF2 (Reliability) | No more than 10 errors in the year. |
| NF3 (Security) | The Login Page doesn’t have access for more than 5 times. |
| NF4 (Availability) | The system is available during working times. |
| NF5 (Usability) | The system is easy to use, and the modules are so simple. |

1. Use case diagram:
2. Scenarios (stories)

**Scenario 1: User logs in**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | User inputs credentials | --- |
| 2 | User presses Login button | F1 |

**Scenario 1.1: User requests password reset**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | User clicks Forgot Password button | F2 |
| 2 | User enters his/her username | --- |

**Scenario 1.2: User rates the software**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | User clicks Logout Button | F3 |
| 2 | User chooses rating | F4 |

**Scenario 2: Administrator adds a new user**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views users table | F9 |
| 3 | Administrator clicks Add User button | F11 |

**Scenario 2.1: Administrator edits user information**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views users table | F9 |
| 3 | Administrator clicks on a user from the user table and edits the displayed fields | F12 |

**Scenario 2.2: Administrator deletes a user**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views users table | F9 |
| 3 | Administrator clicks on a user from the user table and clicks Delete button | F13 |

**Scenario 2.3: Administrator deletes all users**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views users table | F9 |
| 3 | Administrator clicks Delete All button | F14 |

**Scenario 2.4: Administrator searches through users**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views users table | F9 |
| 3 | Administrator types the criteria in the search bar | F10 |

**Scenario 3: Administrator adds a new project and assigns users**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views projects table | F15 |
| 3 | Administrator clicks Add Project button and fills the fields | F17 |
| 4 | Administrator inputs user IDs to assign users to the project | F18 |

**Scenario 3.1: Administrator edits project information**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views projects table | F15 |
| 3 | Administrator clicks a project from the table and fills the fields or removes previously assigned users | F19 |
| 4 | Administrator inputs user IDs to assign users to the project | F18 |

**Scenario 3.2: Administrator deletes a project**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views projects table | F15 |
| 3 | Administrator clicks a project from the table and clicks Delete Button | F20 |

**Scenario 3.3: Administrator searches through projects**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views projects table | F15 |
| 3 | Administrator types the criteria in the search bar | F16 |

**Scenario 4: Administrator updates bug type and severity, and assigns developer to bug**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views bugs table | F21 |
| 3 | Administrator clicks on a bug and adds developer ID and chooses the type and severity | F23 |

**Scenario 4.1: Administrator searches through bugs**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator views bugs table | F21 |
| 3 | Administrator types the criteria in the search bar | F22 |

**Scenario 5: Administrator views rating table**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Administrator logs in | F1 |
| 2 | Administrator clicks Rating Table Button | F25 |

**Scenario 6: Testers views assigned bugs that needed to be tested**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Tester logs in | F1 |
| 2 | Tester views assigned bugs that needed to be tested | F32 |

**Scenario 6.1: Testers searches through assigned bugs**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Tester logs in | F1 |
| 2 | Tester views bugs table | F32 |
| 3 | Tester types the criteria in the search bar | F35 |

**Scenario 6.1: Testers can update a specific bug status**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Tester logs in | F1 |
| 2 | Tester views bugs table | F32 |
| 3 | Tester types the criteria in the search bar | F35 |
| 4 | Tester types update a specific bug status | F43 |

**Scenario 7: Testers views assigned projects**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Tester logs in | F1 |
| 2 | Tester views assigned projects | F36 |

**Scenario 7.1: Testers searches through assigned projects**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Tester logs in | F1 |
| 2 | Tester views bugs table | F32 |
| 3 | Tester types the criteria in the search bar | F37 |

**Scenario 7.2: Testers views assigned users in specific projects**

|  |  |  |
| --- | --- | --- |
| **Step** | **Description** | **Requirement ID** |
| 1 | Tester logs in | F1 |
| 2 | Tester views bugs table | F32 |
| 3 | Tester types the criteria in the search bar | F37 |
| 4 | Testers views assigned users | F38 |