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**Al-Isra University**

**Faculty of IT**

**Department of Computer Science**

**جــامـعـة الإسراء**

**كـليـة تكـنولوجيـا المعلومـات**

**قـســم هندسة البرمجيات**

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| **Department:**  **SE** | **Assignment:**  **#1** | **Date:**  **5/11/2023** |
| **Semester:**  **first** | **Year:**  **2023/2024** | **Instructor**  **Ikhlas AL Mukahel** |
| **Course No.:**  **6034155** | **Course Name:**  **Software Quality Assurance** | **Section:**  **1** |
| **Student No.:**  **AD0039** | **Student Name:**  **فراس سمير رمضان سليم** | **Submission date:**  **06/11/2023** |

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| --- | --- | --- |
| Question No. | Mark | |
| Max | Score |
| 1 | **8** |  |
| 2 | **7** |  |
| **Total Mark** | **15** |  |

**Activity 1: Software Quality Factor.**

**Q:1 What quality factors are missing ?**

1. The overtime salary for our staff is calculated incorrectly

* Correctness

1. New system for employees attendance was introduced but payroll systems needs a major modification to work with the new system

* Flexibility

1. The mobile battery cannot work for more than two hours after the light payroll system was installed.

* Reliability

1. The company has decided to move to the web to use their payroll system. However the existing system cannot work on the web and a new system should be implemented

* Portability

1. Payroll cannot be produced on time because the system is slow and can calculate the salaries of 100 employee per hour while our employees now are more than 2000. Because of the increase of number of employees, the system fails at least three times a day.

* Efficiency

1. Several bugs were found and reported in the system. It seems that not enough TESTING was done before system deployment.

* Testability

1. Help disk team noticed that when a user reports a bug in the system, it takes up to two days to detect and fix that problem.

* Maintainability

1. Our development has developed a billing system two years ago. Now we have a contract to build staff tracking and reporting system. There are many similar functions in both system but we have to start to develop every function from scratch

* Reusability

**Q:2 Read the following requirements for an HR application. What is wrong with them? Reformulate these requirements to be of a better quality**

1. • Overtime for employees should be calculated correctly.

* Overtime for employees should be accurately calculated, and the system must provide correct results consistently.

1. • HR staff should be able to learn system very easily

* The HR staff should be able to learn the system easily within a specified timeframe, such as through onboarding or training programs.

1. • The mobile version of the system should not consume mobile battery

* The mobile version of the system should be optimized to minimize battery consumption while ensuring efficient operation.

1. • Maintenance and bug removal requests should not take a long time.

* Maintenance and bug removal requests should be addressed within a defined and reasonable timeframe, with clear response and resolution timeframes.

1. • System should not be in failure mode for long periods

* The system should have a high availability rate and minimal downtime, ensuring it operates effectively and reliably.

1. • In the future, system might be moved to other environments.

* The system should be designed with portability in mind, allowing for easy migration to different environments in the future, while maintaining functionality.

1. • Employees should be able to access their information.

* Employees should have secure and user-friendly access to their personal information, with appropriate authentication and authorization mechanisms in place.

**GOOD LUCK ☺**