Report Coursework C#

1) Use case

Requirements Analysis for NBM

The Napier Bank costumer support application is required to have:

* A form, where the client is able to actually provider the header and core of a message.
* A method that is able to actually classify the nature of the message sent by the user.
* A method that will automatically show at video the message sent by the user.
* A method that will automatically store in a json file all all the message send thourght the Napier Bank contact form.
* A method that will retrieve all the message sent by any user and print them at video.

Use case diagram

Use case with soft goals (NFRs)

Testing Strategy

Test Plan

Test cases

Test procedures

Test report.

* Type of test executed (see lecture 6)
* Class testing
* Environmental needs
* Test schedule and plan (should includes objectives and Scope + Test iteam.
* Risks and solutions
* Develop test cases and construct tests to verify that messages are processes correctly for each type of message.
* USE visual studio testing facilities.

Agile approach development and VCS

An Agile development approach is required in terms of development speed and overall project management.

For allowing the contribution between multiple developers or teams in the same project, it is necessary to use a **Versional Control System,** to allow every developer to:

* Keep track of the files and documentation history.
* Have access to all the versions of any file
* Collaborate on the same project and even in the same files.
* Being able to receive rapidaly the updates/changes made by other developer in the project.

A perfect solution for our requirements and needs, is: Git, the most popular and widley used Version Control System (VCS).

In this project, it will be used the Github platform, having so access to free infinite numbers of private repository, and have an extremely easy management of the access granted to every development team member, on a specific repository.

Evolution and Mainteance prediction

In this first part of the evolution and maintenance section, we will discuss the next evolution step of the Napier Bank Application.

Just after the release, the core functionalities of the application dedicated to actually recognize the category message, will be improved training a model that will be able to detuct with an higher percente of success, the nature of the message, and report it to the dedicated team.

In terms of user experience, it will be created a chatbox that will be automatically loaded when the application will be runned from the user. Here, in this section, thanks to the interaction between user and application, it will be easier for both users and support team manage any support request. With this new update, any user will be able to directly select in the chatbox, the type of support requested: personal account, cash lock, issues log-in to the account.

Thanks to the chatbox presence, we will be able to response quickly to the most popular questions and issue (FAQ), for example: How to access to the personal bank account using the Bank application or, how to get a bank statement. In this way, we will be able to solve user doubt's hopefully immediately, allowing the user team to focus on most urgent and particular cases, that require a full and human support.

In this send part of the maintenement section, we will analize the the maintenemence costs predicted for the next year, in terms of hosting and version control systems team upgrade.

To actually keep the application online, we will need:

* A Linux hosting server or VPS (About 8£ for month / about 96£ a year)
* At least 3GB of Storage space and Database administration acess (About 3.50£ for year)
* A domain name (About 10£ for year)

The minimal annual cost for keeping the application online and reacheable from any costumer, it will be about 109.50£.

Of course, this could potentially increase with growth of server resources required.

Curretly, best option in terms of scalaility and cost, would be a Cloud Based solution, that we can actually just have costs just for the resources that have been used.

Maintenance details

The development Team will guarantee that at any time, the system will be online and reacheable to any Napier Bank client.

Of course, any new feature will be discusseed with the entire development team and Project Manager, having its dedicated design process, dedicated time and release existimation.

At the same time, the developers needs to guarantee that if any malfunction or vulnerability has been found and/or report, it is our duty to actually report this vulnerability to the Project manager, fix it, test again the platform and update the rest of the team about the status of this vulnerability (in review - fixing in progess - fixed).

It will also be in the interest of our client privacy and security, doing periodically code refactory releted testing, with relative code refactory in case of any new product version of techologies and/or tools used within the project will be released.