Criteria A- Planning

Defining Problem
[For line numbers see appendix]
The client, Ms x, works as a director in HSBC Indonesia. She wants to create a solution to improve managing employees' salaries- positions which can be calculated hourly. [line 1 -4]. Currently, their current system in Indonesia works manually on excel [line 17], and the salaries are stored in individual record files, which as a result, is more error-prone and cumbersome leading to tremendous amounts of data storage being used. Another problem is their amounts of hours worked are not accurate enough, so it might also fail to take account of overtime and normal pay. Monitoring their exact working hours, which takes into account of both overtime and normal pay, would produce more reliable salaries.

Therefore, Ms x has contacted me to request a "trial" technical solution to automatically calculate employees' salaries systematically [line 19]. She asks for the software to be very "professional" and consist of a "similar- style to the HSBC website" [line 9].

A rationale for the proposed solution

I decided that choosing to employ a software system, with a database, would be the perfect solution for Ms X as it doesn't require an employee to manually input thousands of workers' salaries [line 3] The salaries are automatically generated from when a person clocks in and out from the office by logging into the system and clicking the in/out button., taking into account of normal-overtime pay. The solution will maximise efficiency and increase accuracy, beneficial to both employees and the bank as employees wouldn't get a lower salary than expected and that the bank wouldn't lose money.

The system will generate the salary by measuring the hours of the employee working, and this will be checked against the set of hours that staff have to work per week and will get overtime pay beyond this [line 22]. The hours will then be multiplied by the hourly rate of the specific job of each employee and then add to the total salary that they will get. Each time they clock both in and out, the database will be updated.

I chose to use PHP to create the solution. It is better than other choices as it is compatible with databases as PHP also supports MySql. PHP is also supported within HTML as they are interchangeable when designing a page. Besides, it is also well supported within the web and is relatively faster than other scripting languages such as Java as it does not use lots of resources from the system. PHP also has easier maintenance, and is an object-oriented language. It reduces lines of codes and can reuse classes and, it also holds interactive features, which I require.

I also chose to do MySQL which is a relational database management system which stores all the data needed. It can also access data at high speed and is reliable, simple and straightforward to use. It can also run on Windows and Mac OS thus allowing more flexibility.

Success Criteria

1. When clock in and out, this will update information in system
2. Employees can view their current salary information
3. Employees will be able to login securely
4. It is compatible with a range of devices (ie. phones, desktops etc)
5. Employees with different positions will have different hourly rates depending on the job
6. Staff should have set weekly hours and get overtime beyond this.
7. Employees can change their password
8. There will be a salary history page which will display their salaries earned in the year, as well as monthly.
9. There will be an attendance record page which will track their hours worked by displaying hours worked by month and in the current year
10. There will be a contact page so that the employee can contact the person in charge of the application
11. The web application should look professional and correspond to the HSBC branding guidelines as specified in appendix in the link given.

[495]