TEAM 12

Project 4- Maintenance Plan

As the project 4 software, game website we created is a reusable software, it could be maintained easily for the long term with less development risks. The website contains three games: pong, tetris and snake. The maintenance would mainly take place in changing the game strategy otherwise it would just depend on developing the website and improving the graphics of the game. Adding other extra features like beating the high score, adding sound effects, adding gaming levels like we did in project 2 (easy, medium, hard) etc. will be under the maintenance for next year. Adding more games on the website is obviously an option to the maintenance plan and we would prefer adding the games which are more popular among the community for example Pacman and Mario.

Cost: There will be internal cost for the maintenance of this project which will be cost to developers. As project 4 took 101 hours to finish (as per 24 April), we would say that its maintenance next year would take 300 hours to finish as it would include adding new games, features and redesigning the existing 3 games and website. On an average, for 101 hours, average hours per person is 20. So, for maintenance, it would be around 60. Lines of code (LOC) will obviously increase on maintaining the website and hence the increment will occur in the effort calculation. Though, calculating code on the basis of LOC would be unreliable because a lot of code is imported from the pre-built pygame library. Also, python is considered as high-level language and also has dynamic semantics. Hence, other metrices must be considered in estimating cost for example Function Points (FP) as obviously the level of difficulty is different for all the maintenance tasks discussed above. FP uses input, output, database queries, files, and system interfaces to measure size of system. Hence, the effort will be calculated by calculating the FP using Technical complexity factor and unadjusted function point. Once we calculate the FP, effort could be calculated using per person hour and the estimate cost could be calculated per person. This would be the cost of hiring developers. Hence, using function points would give us the accurate. Also, there are many factors that will be counted while calculating the cost using FP method. When we calculate the estimate cost of hiring a developer using the approximate hours data of the project 4, we can get the TCF from 0.65 to 1.35. Diving the tasks in the level of complexity, we can get UFP and at last, we can calculate effort using the two formulas: FP= UFP\*TCF and Effort = FPD\*person-hour/FP.

Monthly/annual fees for the server to host the website: It depends on the size of the website mainly and the platform that we choose to host the site for example GoDaddy or SquareSpace. The approximate cost for these servers for this website goes from $60 a month to $100 a month and could be more when new features are added, and the size is increased. Moreover, for the distribution platform like app store or play store, the cost will again depend on the size of the website.