**COMPUTER SCIENCE 2 - 2016/2017**

**MP1 - POST-ASSESSMENT EXAM**

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1. What is a project?

A project is something that is planned, a long-term assignment. It is always unique and usually worked on a daily basis. Also it must follow incremental steps.

2. Explain how a project is different from an everyday task.

A project is started, worked on, and completed on a daily basis and a task is a small assignment. A project requires much more planning and preparing than a task. Projects also usually require a team. Tasks may have groups.

3. In your own words, explain what Project Management means.

Project Management is the process of planning, preparing, and organizing before a project begins.

4. List and describe three benefits of Project Management.

1. Quality of the project improves

2. Schedules are typically met.

3. Problems can be predicted and prevented early on.

5. What is the role of a Project Manager?

The project manager is the individual responsibility for ensuring that objectives and goals are met on time.

6. List and describe any three of the traits of a successful Project Manager.

1. Must be a good director - Am I good at providing guidance and instructions to others?

2. Must facilitate - Am I good at discussing things?

3. Must communicate quickly and effectively - Can I answer tough questions quickly and effectively?

7. What is a team?

A team is a group of people who work together to accomplish a common goal.

8. List and describe 3 benefits of working as a team.

Task Sharing - Work can be shared with other team members.

Joint Expertise - Each team member brings their experience to the table.

Project Obstacles - Shared responsibility to complete project tasks.

9. Name the two types of teams discussed in class.

Healthy and Dysfunctional.

10. List the common phases of a typical project.

Concept, Design, Development, Implementation, and Closing Phase.

11. Explain the purpose of Lessons Learned.

Lesson learned brings and insight gathered from the project to the table. Lesson learned helps by avoiding future project failures and helps by making future projects more successful.

12. What is a WBS? What is its purpose?

A Work Breakdown Structure is a project management tool or technique used for breaking down complex projects into the smallest possible, easy to understand tasks.

13. Explain the process of developing a WBS.

The development phase - Review goals and objectives, Identify outcomes, and assign responsibilities.

14. What is the purpose of estimating?

Estimating can determine the cost, amount of time, and amount of effort of something.

15. Name the two types of estimating techniques covered in class.

Top Down and Bottom-Up.

16. Describe the type of estimating that looks at a project as a whole.

Top-Down.

17. Describe the type of estimating that breaks the project down.

Bottom-Up.

18. Explain the difference between effort and duration.

Effort is the amount of time (expressed in person hours, days, months, etc…) required to complete a specific task. Effort stays constant. Duration is the number of calendar periods to complete the task. This may change.

19. List some of the factors that may extend the projects duration

Equipment malfunction, unexpected absences, and run out of supplies.

20. You have a project that requires 40 hours of effort and starts today. You can only work on it Monday-Friday for 4 hours a day. What is the expected duration of this project?

2 weeks (Mon-Fri).

21. You have a project that requires 40 hours of effort and starts today. You can work on it every day for 5 hours a day, however, you have to wait 3 days before all of the necessary supplies arrive. What is the expected duration of this project?

11 days.

22. What is Risk?

Risk is the possibility of something going wrong during the course of the project.

23. What is Risk Management?

Risk Management is planning for any unexpected events that may have negative impacts on the project and developing an action plan.

24. Name and describe 3 benefits of Risk Management.

3 benefits are improved planning process, effective use of resources, and ability to overcome obstacles.

25. What is a Risk Response Plan?

A Risk Response Plan is the process of developing options, and determining actions to enhance opportunities and reduce threats to the project.

1. Explain the difference between Client-Side and Server-Side programming.

Client-Side programming is when client-side scripts reside on a user PC. Server-Side Programming is when server-side scripts reside on the server (main computer).

1. Which type is applicable to the programs you write in this class?

Client-Side programming.

1. What software applications are necessary to create and run a JavaScript program?

A web browser and a text editor.

1. Name 4 major differences between Java and JavaScript

Java’s code is powerful but complex, where JavaScript is easy to learn and use. A special app is required for Java, where JavaScript does not require an app. Java programs must be saved and compiled separately, where code can be added directly anywhere in the HTML text editor for JavaScript. And lastly, Java is used for complex tasks, and JavaScript is used for quick, simple tasks.

1. Describe the advantage of using JavaScript instead of HTML alone.

JavaScript allows you to create pages where content and layout can be modified using special code built into the page.

1. What is the purpose of the <SCRIPT> element?

The <SCRIPT> tag is very important because it is required at the beginning and end of every JavaScript statement. Also it must only be in the <head> section. Without the <SCRIPT> element, there would be no JavaScript outcome.

1. Explain how to display output on the screen using JavaScript.

In order to display output on the screen, the JavaScript statement must start and end with a <SCRIPT> tag. Also the statement must be in the <head> section only. Lastly every line must end in a semi colon.

1. What is a variable? Provide 3 benefits of using variables in computer programming.

A variable is a name given to a piece of data/information. 3 benefits are it is easier to remember, quickly accessible, and it saves time.

1. Explain the meaning of the following statement: “JavaScript is case sensitive.”

This means that capital letters are treated differently then lowercase letters.

1. Name the 4 variable types supported by JavaScript and describe each.
2. Numeric – Any number in standard or scientific notation.
3. String – Any group of alphanumeric characters.
4. Boolean – True or False. Found in conditional statements.
5. Null – No assigned value. Placeholder.
6. Variable “AccountBalance” has been created to hold the user’s current bank account balance represented by dollars and cents. This is an example of a Numeric variable.
7. Variable “UserPhone” has been created to hold the user’s telephone number in the format (555) 555-5555. This is an example of a String variable.
8. Variable UserAge will hold TRUE if the user is 18 or over and FALSE if not. This is an example of a Boolean variable.
9. Variable Total holds no data at all right now. This is an example of a Null variable.
10. What is a function?

A function is a series of commands that can be executed by your program to calculate a value or perform an action.

1. Describe the benefit of using external files in computer programming.

The benefit is that you can easily change and edit the file if you have to. If it were in the code, it would be much harder to edit. Since it is an external file, it will make it more organized and easier to maintain.

1. What is the purpose of commenting code?

The purpose of commenting code is to help the person writing the code. This only affects the programmer, not the user. It makes everything easier and more organized because you know what part is which and you can write your own comment in the code.

1. What is meant by debugging code?

Debugging code is removing unnecessary code from a program. This can make the process much easier, more organized, and easier to understand. If the code doesn’t affect the outcome, then you mine as well get rid of it to make the code cleaner.