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Computer Science HW 7 study guide

These question and answers is a study tool to show my knowledge of what I have learned so far in this class. The questions ask about the first 3 chapters and git. I have answered these questions to the best of my knowledge with the help of my book and a bit of google.

1. What is declaring a variable? Declaring a variable is when you put a data type like double and then assign a word to it. An example is double time = 5. This makes the program recognize that time is a variable and it equals 5.

2. What does git commit do? A snapshot or save point of this project which captures the changes from a previous commit.

3. How is a local repository different than a remote repository and what are the advantages and disadvantages of each? A local repository is just on your computer while a remote repository is on a server or online. Advantages of a local is that if does not require internet access to be used but the disadvantage is that you can only access it from that one computer. The remote repository is online so you can access it from any computer, but the disadvantage of this is that you need internet access to access it or to add on to your work.

4. What is git log? Git log lists the version history for the current branch.

5. How do we ask for user input? input.nextInt(); or input.nextDouble();

6. How do we make notes to people reading our code and what are the different types of notes we can make? You put // and then add whatever you want to say. You can tell them what the program is suppose to do, and you can tell them what the command that you used does.

7. Summarize the process to outline a problem solution in code, as introduced in section 2.2. First you need to set a variable for a constant or ask the user to put in a number. Then you need to know what the formula for what you are trying to solve. You must translate that into code and then display the results.

8. How do we assign a value to a variable? Example double time = 5;. This tells the code that time is equal to 5 and every time the code sees the word time is will use the number 5

9. What is the boolean data type and how can it be used? A variable with the value as true or false is a Boolean data type. It can compare two values. Example: the code has in it the pen is blue. The user asks what the color is and it the code will reply with a true or false.

10. What is a pull request, and how is it different from the git pull command? Pull request tells others about the changes you have pushed to a github repository. Git pull fetches and integrates another repository or local branch.

11. What are the different data or number types we use and how are they different? Byte – 8-bit storage size, short – 16-bit storage size, int – 32-bit storage size, long – 64-bit storage size, float – 32-bit IEEE 754 storage size, and double – 64-bit IEEE 754.

12. How can I create a new branch and select it at the same time? Git checkout

13. Do we use git pull and git push when we are working with our local repository? Yes

14. What is a programming language, and how do we use it in this class? A programming language is creating software that a computer can read. It is a language that the computer can understand, and we use it to create codes that tell a computer to do specific things like make a math game.

15. How could we make a comparison between two numbers? You can use relational operators which is <, >, ==, and etc. This will compare numbers.

16. What are git pull and git push used for? Git pull brings down your work from a repository, while git push pushes it to a repository.

17. What is git pull? Git pull downloads bookmark history and incorporates changes.

18. What is the basic result of a print statement, such as System.out.print(“Hello World”)? It says what is in the quotations. That one will say Hello World.

19. What is git push? Git push uploads all local branch commits to GitHub.

20. What are the two methods to generate a random number that ranges from 0 to 1, 0 to 10, or 0 to 1,000? Math.random(); Math.random() \* 10; Math.random() \* 1000;

21. What does git branch do? Git branch lists all the local branches in the current repository.

22. What is git clone? Git clone downloads a project and its entire version history.

23. How is an if statement different from an else statement or an if else statement? If statement sets conditions for the code inside it to run while an else statement does all the other conditions that an if statement does not allow.

24. What does git init do? Git init creates a new local repository with the specified name.

25. What is the use of an if statement? To tell the code to only run the program inside it if the conditons are met for it.

26. When using System.out.print, what is the effect of \n? [for example, System.out.print(“\n”)] it skips a line on the console.

27. What is an import statement, and what do we typically need to import? Allows the code to read whatever you import. We typically import java.util.Scanner.

28. What is the difference between eclipse and java and windows? The commands for coding are different and different operating systems.

29. How can I select a new branch? Git branch [branch name] is to make a new one.

30. What does git add . do? It snapshots the file in preparation for versioning.

31. This is a Computer Science class, so you should know your way around the computer. First, list the six main components of a computer system. Second, briefly describe their function. Central processing unit – computers brain, retrieves instructions from memory and executes them. Memory – where information is stored in a computer. Storage devices – a volatile form of data storage, any information that has been stored in memory.

32. What is our upstream repository? When something goes to a repository that you git push.

33. How can I create a new branch? Git branch [branch-name]

34. What is the difference between (System.out.print) and (System.out.println)? the ln part makes the next System.out.print drop to the next line.

35. How do I use git add and git commit? Git add adds the changes to the file and git commits lets you write a small description of what you changed or did.

36. How does Git allow us to travel back in time and what does that mean? Git log and it lets you see the version history for the current branch.

37. What is the benefit of multiple users having local copies of a repository? They can both work on it themselves without the other messing up what they were doing. Then if they want they can merge the two.

38. Give an example of how to outline a code. Figure out what you want the code to do. Then start with your labeling your variables. Then start with the first part of the code and slowly work your way to the end.

39. What is eclipse and how do we use it in this class? Eclipse is a program that allows us to write code in. we use it to create our own codes in the class and how to code better and more efficiently.

40. At the start of each program, we go into the main method. What is the main method, and why is it important? Main method calls all the other methods required to run your application. It is important because you need it to run your program.

I have learned a lot of things from this study guide. I have learned more about git as well as some of the commands in my program that I have never thought of what they really did. These questions was a good way to familiarize myself with the material.