Assignment\_2\_readingAndQuestions

Due date:

Course: FDU CSCI-3307 Java

Instructor: ilker Kiris

Student: <your Name and Last Name goes here>

**DIRECTIONS**

1. **Copy** this file to **ass2-readingAndQuestions-yournameLastName** and work on it
2. Please read the below specified sections from our book

Java - How to Program, Early Objects”, Deitel & Deitel", latest edition (i.e Early Objects 10th Edition)

1. Write your answers to book questions properly labeled.
2. Write your answers to provided “Related questions” below them
3. For questions that are programming, follow the directions in below section

**SETUP and how to submit programming questions**

1. Create Java Project (highly suggesting to create it in STS) called ass-2-littlePrograms and put the java packages into a source directory called src
2. You can use <https://github.com/fdu-3307/example-1-operationsOn2numbers>, as how you should organize packages, what to have in .gitignore, README.md, …,
3. Use package and file names like following example. For example for **question** **2.6** in **chapter 2** that requires programming, create a package **com.mycompany.ass2.chapter2** , create a class called **Program\_2\_6**.
4. Have a README.md file at root (top) level of project explaining what is happening
5. Create a class diagram (highly suggesting to install ObjectAid eclipse plugin to STS and using that to create class diagram and an image of the class diagram and put them to directory called *design* under root level). Call that classDiagram , have all your program classes in it.
6. Use you github organization called **csci3307-ass-yournameLastname**. Create it if you have not already.
7. Create a github repository called **ass-2-littlePrograms-yournameLastname** in above organization
8. Create a local project directory based git repository of your project, commit your code (first add to index then commit) to local repository, then set above created github repository as remote repository for the project and finally push to remote github repository
9. **Email** ilker at ilkerkiris@gmail.com the link to your above created github repository. **Also** make sure to write that link in your copy of this file.

**Book’s Chapter 1 - Sections to read and book questions to answer**

1. Read sections 1.5, 1.8, 1.9.
2. Answer questions 1.2, 1.3, 1.6, 1.7, 1.8

**Related questions (RQ)**

1. Who invented/crated Java?
2. Which company originally created the Java?
3. What was original name of Java?
4. Which year Java was first released?
5. Which field Java creators were trying to provide solution to?
6. Which company currently owns Java?
7. What is the latest Java version currently?
8. Which language Android use?
9. Roughly how many cell phones can run Java worldwide?
10. Roughly how many Java developers are there in the world?
11. What does JVM stand for?
12. What do you need JVM for? What does JVM do?
13. What does JRE stand for?
14. What do you need JRE for?
15. What is the relationship btw JVM and JRE?
16. What does JDK stand for?
17. What do you need JDK for?
18. What is the relationship between JRE and JDK?
19. Can Java run on any machine? What is needed for a Java application to run on a computer?
20. What is a keyword? List some Java keyword.
21. Is Java case sensitive? What is the case for Java keywords?
22. How do you create a line comment in Java?
23. How do you create multi-line (block) comment in Java?
24. What command line tool do you use to compile a Java file?
25. What command line tool do you use to run a Java byte (class) file?
26. What is the Java source file extension?
27. What is the Java byte code file extension?
28. What gets created when you do below at command line?

javac MyClass.java

1. What does a class like MyClass needs to have for it be an entry point of a Java application?
2. What happens when you type below at command line?

Java MyClass

1. What is the output of following code?

public class TestMe1 {

public static void main(String[] args) {

System.out.println(“3.5 \* 4 / 2 – 2.5 is ”);

System.out.println(3.5 \* 4 / 2 – 2.5);

}

}

1. Which of below option(s) is/are correct for a main method? Put OK after it.

public static void main(String[] args) { …..}

public static void main(String args[]) { …}

public static void main(String args) { ..}

public static void main() {...}

1. If a NoClassDefFoundError occurs when you run a program, what is the cause of it?
2. If a NoSuchMethodError occurs when you run a program, what is the cause of it?
3. What is a syntax error?
4. How do you know you have syntax error from command line?
5. How do you know you have syntax error in STS (eclipse)?
6. What is a runtime error? Give an example.

**Book’s Chapter 2 - Sections to read and book questions to answer**

1. Read sections 2.2, 2.5.1, 2.5.4, 2.5.6
2. Answer questions 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 (this is a programming one), 2.7, 2.8, 2.9, 2.10, 2.11, 2.15 (programming), 2.16(programming), 2.17(programming), 2.18(programming, call it Program\_2\_18)

**Related questions (RQ)**

1. What is equivalent of below? Tip; following order of execution per operator precedence, wrap the sections that operate first in (..)

a – b + c –d

1. What is equivalent of below? What is its final value?

1 + 2 \* 3 > 4 \* (5 + 6) && (7 – 8 > 9)

1. What is equivalent of below?

a=b += c = 5

1. What is value of below statements?

true || true && false

true && true || false

!true

true ^ false

1. What is “!” operator?
2. What is “^” operator?
3. Write a program (call it Program\_RQ\_2\_1), that displays the result of
   1. x 2.5 – 1.3 x 3

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31.5 – 1.5

**Book’s Chapter 3 - Sections to read and book questions to answer**

1. Quick scan read sections 3.2.1, 3.2.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2
2. Read and understand the code in figures 3.8, 3.9
3. Answer questions 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.10, 3.11(programming)

**Related questions (RQ)**

1. What is “import” keyword for? Let’s say there is a class called MyClass in a package com.mycompany.app1.comp1, how can you import it in another class?
2. What is “static” keyword for?
3. What is “final” keyword for?
4. What are 4 access modifiers in Java?
5. What does below in a class MyClass mean?

public static final String DEFAULT\_NAME = “ilker”;

1. What do 4 java access modifiers mean?
2. Why is main method “static void main”?
3. Give 3 “primitive data type” and their wrapper Objects?
4. What is the difference between boolean and Boolean?

**Book’s Chapter 4 - Sections to read and book questions to answer**

1. Quick scan read sections 4.7, 4.8
2. Read and understand the code in figures 4.12, 4.13, 4.14
3. Write programs for code that is in figures; (4.4 + 4.5 combined), 4.8, 4.10, 4.15
4. Answer questions 4.8, 4.15, 4.16, 4.20 (programming), 4.24 (programming), 4.25, 4.26

**Related questions (RQ)**

1. What is wrong with following while statement?

int sum = 0, z = 0;

while (z <= 0 ) {

sum += z;

System.out.println(“z=” + z + “, sum=” + sum);

}

**Book’s Chapter 5 - Sections to read and book questions to answer**

1. Quick scan read top part of sections 5.4, 5.5, 5.6, 5.8
2. Read and understand the code in figures 5.6, 5.11 + 5.12
3. Write programs for code that is in figures; 5.1, 5.2, 5.7, 5.9, 5.13
4. Answer questions 5.2, 5.4, 5.7, 5.8, 5.9, 5.18 (programming based on Fig 5.6), 5.30 (programming based on 5.11 + 5.12, make sure to have and if needed update caller/test code from 5.12)

**Related questions (RQ)**

1. What is the difference between while(someCondition) {blabla} and do {blabla} while(someCondition)?
2. What is the difference between “break” and “continue” in a loop?
3. What data types one can have as “key” in a switch statement? (like switch(key) {….}
4. What is the meaning of “case” in a switch statement?
5. What is the meaning of “break” in a switch statement? What happens when “break” statement executes in a switch statement?
6. What is the meaning of “default” in a switch statement?
7. Is “break” optional in a switch statement?
8. Is “default” optional in a switch statement?
9. What happens if you don’t have “break” after a case statement in a switch statement?
10. What happens if you don’t have “default” in a switch statement?
11. Is below if statement correct? If not what is wrong with it? If not what is the correct way to do that?

int dayOfMonth = 12;

if(1 <= dayOfMonth <= 31) {…..bla bla…}