

AP Computer Science A Summer Assignment 2017

The objective of this summer assignment is to ensure that each student has the ability to compile and run code on a computer system at home. We will be doing a lot of coding during the school year in class, but there will be times when it is necessary to do work outside of the computer lab.

The first half of this assignment is attached. You will need to answer the questions and return the programming section and this cover sheet to your teacher on the first meeting day of class in August. The summer assignment is equivalent to a test grade, so it is imperative that the work be done and handed in.

The second half of this assignment is the java compiler setup instructions.

Summer assignments that are not completed and turned in by August 18th will count as a 0%.

By signing below, the student and parents/guardian recognizes that this is a college level course in computer science. AP Computer Science A is a demanding class and success depends on ability, development of prerequisite skills, and a willingness to study. Advanced Placement classes require more study time than the typical high school class and this course runs on an accelerated schedule. The requirements for the AP test are covered prior to the exam that is administered in the first week of May.

A list of those requirements can be found by visiting the College Boards website (http://www.collegeboard.com/student/testing/ap/compsci_a/topic.html?compscia).

Student Name

Date

Student Signature

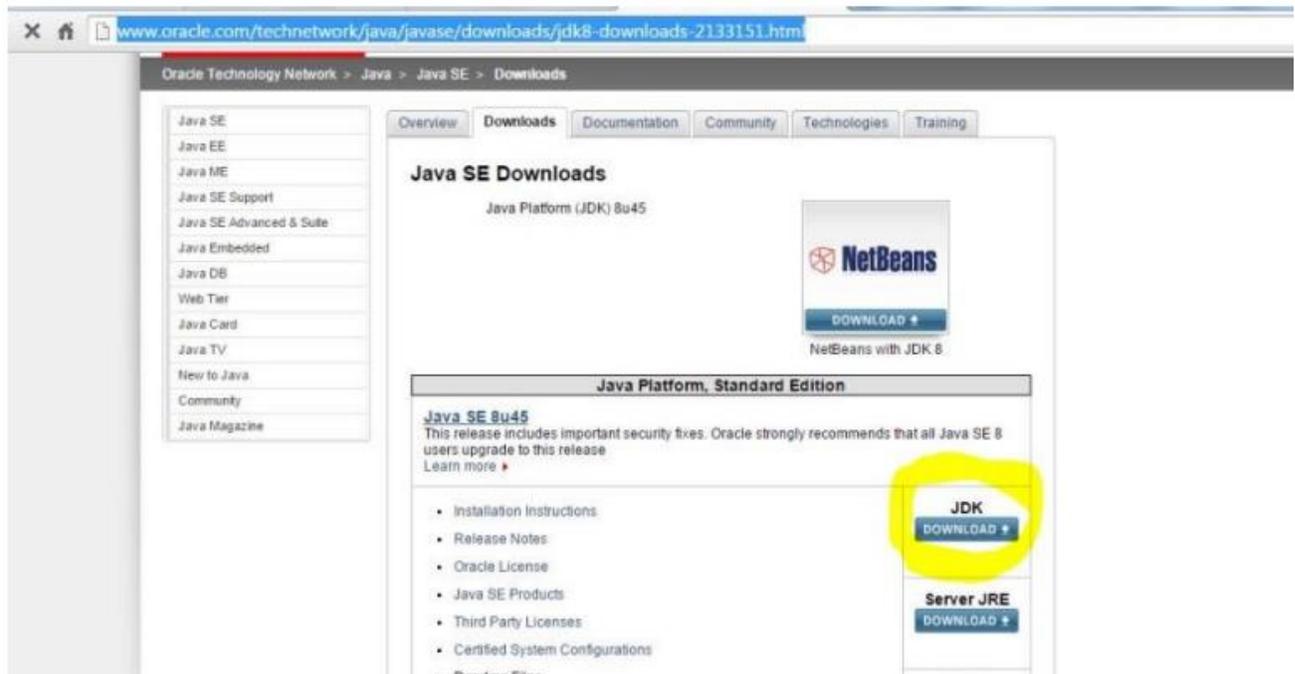
Parent Signature

Sign Up

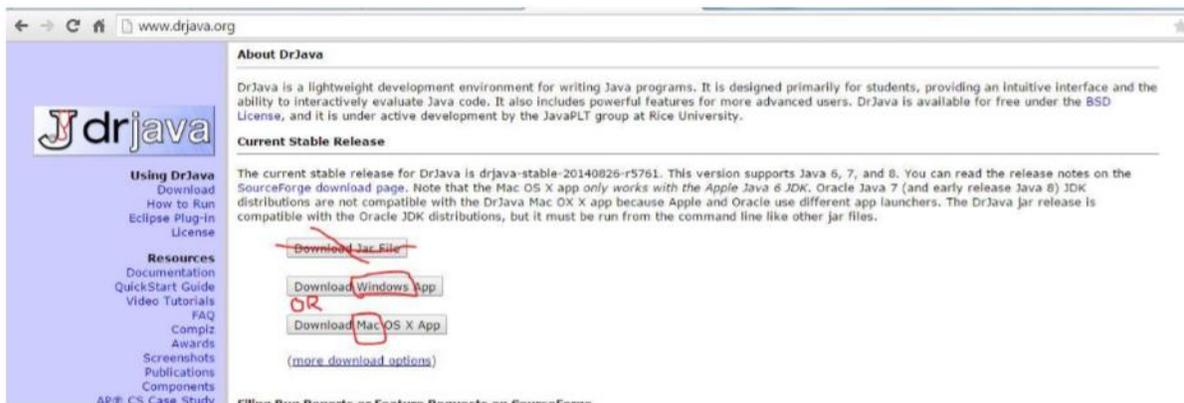
1. Please fill out my [APCS Student Info Form](https://goo.gl/forms/nAQNh1E71EIZCN2K2)
<https://goo.gl/forms/nAQNh1E71EIZCN2K2>
2. Sign up for our APCS Remind101 I will send out reminders over the summer so go ahead & sign up!
To join text @dyerapcs to 81010 if you prefer email reminders send a blank email to dyerapcs@mail.remind.com.
Parents/guardians are also welcome to sign up – but the APCS students MUST sign up.

Set up

3. Windows Users: Download the latest JAVA Development Kit (JDK) and install it.
This is to allow you to code.
(Mac Users have this already – skip this part & move on.)
<http://www.oracle.com/technetwork/java/javase/downloads/index.html>



4. Download the Dr. Java compiler for your machine (Windows jar or Mac jar) <http://www.drjava.org/>



Program

5. Open Dr. Java



Type the following code (see pic below)

```
1 /*Your Name
2 APCS Summer Assignment*/
3
4
5 public class APCS
6 {
7 public static void main(String [] arg)
8 {
9 System.out.println("Hello World");
10 System.out.println("Hi Dr. Smith! My name is YOUR NAME.");
11 }
12 }
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
```

```
Welcome to DrJava. Working directory is C:\Users\200701022\Desktop
> run APCS
Hello World
Hi Dr. Smith! I wrote a program!
>
```

If you want to see the numbers go to EDIT – Preferences – Show all line numbers

Save your file as APCS (it won't work if you save it as something else)

Press the COMPILE button then the RUN button

Save the program as APCS.java on a memory stick and bring it to class or email it to yourself.

- Using the code from above as a template, write a program, in the simplest way possible, that will output the following. You are allowed no loops when you write the program. Name this file Stars

```
*
**
***
****
*****
```

- Rewrite the program above, but you are limited to the following two output statements. You are only allowed the following two output statements:

```
System.out.print("*"); //usable only once
System.out.println(); //usable only once
```

Your code must use 2 loops and cannot have any other output statements than the two listed above. You can have no more than the two output statements that are shown above.

Read

8. Chortle PART 1 – Chapters 1-4

Start at the beginning and work your way through Chapter 1 – Chapter 4.

You will have a **test** over Chapters 1-4 on the Friday after we return to school.

<http://chortle.ccsu.edu/cs151/cs151java.html>

Important things to keep in mind:

1. Syntax is important!!! Java is a case sensitive language, so a variable defined as XXYY is different from XyXy.
2. The // are your way of commenting lines in your programs.
3. Unlike Pascal, Strings use double quotes not single quotes.
4. The braces { and } are the equivalent of begin and end in Pascal.
5. For now, the only changes in code should take place in the area between the two braces shown below.

```
public class SummerAssignmentProgram3
{
    public SummerAssignmentProgram3()
    {
        //Put Your Code Here! Don't change anything else.
    }
    public static void main(String args[])
    {
        SummerAssignmentProgram3 app=new SummerAssignmentProgram3();
    }
}
```

6. Here is an example of a nested for-loop structure. The word *for* and *int* must be all lower case.

int is a variable type and is shorthand for Integer.

```
for(int x=0; x< 100; x++)
{
    for(int y=0;y<100;y++) {
    }
}
```

7. You will only need semi-colons at the end of your System.out.println() or System.out.print() lines of code.