

ITEC 120 Lab 1

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Task 1: Create and run your first program

Step 1: Login to the computer and start jEdit

Login using your RUID and password. Next, use the following path through the start menu to start jEdit. Start -> Programs -> College Of Science And Technology -> Editors ->jEdit

Note: The lab image may be different and this location could change. If it does, then you will be given instructions on how to start it.

Step 2: Paste the default template into the program and save your code

Download the default program template and paste it into jEdit. You can get the default template from:

<http://www.radford.edu/~aaray/template.java>

Decide what you want to call your program (i.e. first.java) and click file save as. Type in the filename (at the bottom of the popup window), and save it in your H Drive in a folder called Programs. Once you save the file, your text should become colorful. Next change the word template in the jEdit window to match whatever name you saved the file to be (i.e. first [note, leave off the .java]).

Step 3: Modify the template to print out a message

Each line in the program is considered a line of code. Each line has a specific meaning and usage in the program. You will write a few lines of code that create a variable to hold a message, store text in the variable, and print out the variable. All lines of code should be added after the line:

```
//Insert your code below this comment
```

and before the line

```
//Do not insert any code after this comment
```

Add the following lines to the program:

```
String message;  
message = "Hello World";  
System.out.println(message);
```

Step 4: Run your program

In order to run your program, you need to translate it from a format that we can read to a format the computer can read. This process is called compiling.

To compile your program, you need to start a dos prompt and navigate to the directory where your program is stored. To start a dos prompt click start, then click

run, then type cmd, then click ok. To navigate to the directory where your program is stored you type cd Programs.

Once you are in the directory (you should see a H:\Programs> in the dos prompt before the flashing cursor), type dir to make sure your program is in that directory. Next, you can compile your program by typing javac programName.java. If you get errors, talk to me and I will help you solve them.

Type dir and you should see a file called programName.class. This is the machine readable form of your program. In order to execute the program you use a program called java to execute the machine code. Type java programName and your message should be printed to the dos prompt.

Task 2: Create a simple calculator that can add three numbers

Imagine that you are on a Japanese game show that challenges contestants to add three whole numbers together and be the first to yell out the answer. You are a smart contestant and know that you can write a computer program to help you win the game.

All of the contestants can use computers, but the only programs they can use on the computer are: jEdit, cmd, javac, and java. In order to get a leg up on the competition you'll need to create a program that can add the numbers together for you.

Step 1: Decide what variables to use

The first step in solving this problem is deciding what needs to be stored in memory and why. You will need to read three numbers from the command line, store them in variables, and then store the resulting addition in a separate variable. Use int variables to store all of the numbers.

Example:

```
int variable1;
```

Step 2: Store information into variables

Create a Scanner object and call the nextInt method on it. For example:

```
Scanner scan = new Scanner(System.in);  
variable1 = scan.nextInt();
```

Step 3: Do the addition

You will need to use an assignment to come up with the final answer. For example:

```
variable4 = variable1 + variable2 + variable3;
```

Step 4: Display the answer

Use the System.out.println method to display the result of the previous calculation.

Step 5: Compile and run your program

Use the instructions from the previous lab to complete this step.

Step 6: Show me the result

Add the numbers 313, 293, and 483 together. Your program should print out 1089. Once it does let me know so I can give you credit for the lab.

You should be able to answer these questions after completing this lab. If you cannot answer the questions, come talk with me.

How do you write a program?

How do you compile a program?

How do you run a program?