

Honors Computer Programming - Java

Chapter 1

Programming Problems

Directions for each program: Make sure you give your program an appropriate name and format it so that it is readable. Your name and program title need to appear within a commented area at the top of the program.

program 1

Name program Write a program that displays your name inside a box on the console screen, like this:

```
+-----+
|  Your name  |
+-----+
```

program 2

Face program Write a program that prints a face, using text characters, hopefully better looking than this one:

```
////////
|  o o  |
(|  ^  |)
|  \_/  |
-----
```

Use comments to indicate when you print the hair, ears, mouth, and so on.

program 3

Christmas Tree program Write a program that prints a Christmas tree:

```
  /\
 /  \
/    \
/      \
-----
"  "
"  "
"  "
```

Remember to use escape sequences to print the \ and " characters.

program 4

Sum Integers program Write a program that computes the sum of the first ten positive integers, $1 + 2 + \dots + 10$
hint: Write the program in the form:

```
public class Classname
{
    public static void main(String[ ] args)
    {
        System.out.println( . . . );
    }
}
```

program 5

Sum Reciprocals program Write a program that computes the sum of the reciprocals $1/1 + 1/2 + 1/3 + \dots + 1/10$. This is harder than it sounds. Try writing the program, and check the result. The program's result isn't likely to be correct. Then write the numbers as floating-point numbers, 1.0, 2.0, ... 10.0, and run the program again. Can you explain the difference in the results? We will explore this phenomenon in Chapter 3.