

## Putting It All Together

- the “basic lines”:

```
class NAME
{
    public static void main( String argv[] )
    {
    }
}
```

- use of comments to help read the code
  - to comment the entire line: `// a comment`
- be aware of:
  - punctuation
  - capitalization
  - brackets
  - parentheses
  - spelling
- space is only for reading
- using `System.out.println( ... )`;  
the “...” can be filled with:
  - string(s)
  - variable(s)
  - combination of strings and variables
- checking conditions like “*if* something happens...”:
  - `if( ... ) ...`
  
  - `if( ... ) else ...`
  
  - `if( ... ) else if( ... ) ...`

## Writing the Smallest Java Program

- Start by writing a program that does nothing.

```
class -----
{
    public static void main( String argv[] )
    {
    }
}
```

- What is the output of this program?

## Writing "Hello World"

- Now, write a program that prints to the screen "Hello World!".

```
class -----
{
    public static void main( String argv[] )
    {
        -----
    }
}
```

- What is the output of this program?

## Writing Add

- Write a program that adds two integers and prints out their sum.
  1. Start by creating 3 variables. (**why 3?**)
  2. Give these variables initial default values.
  3. Add two integers together.
  4. Print them to the screen.

```
class _____
{
    public static void main( String argv[] )
    {
        // declare variables

        -----

        // initialize the variables

        -----
        -----
        -----

        // add them

        -----

        // print output to screen

        -----

    }
}
```

- What is the output of this program?

## Writing Add (General Numbers)

- Write a program that adds two *numbers* and prints out their sum.
  1. Start by creating and initializing 3 variables. (**what type are they?**)
  2. Add two numbers together.
  3. Print out the sum to the screen.

```
class
{
    public static void main( String argv[] )
    {
        // declare and initialize variables

        // add them

        // print output to screen

    }
}
```

- What is the output of this program?

## Assigning Grades

- Write a program that determines the letter grade of an exam mark and prints it out to the screen. The grading criteria is as follows: 90-100: A, 80-99: B, 70-89: C, 60-79: D, 0-69: F.

```
class Grades
{
    public static void main( String argv[] )
    {
        // use a default test score
        int testscore = 76;

        // check to see if it's an A
        if( testscore >= 90 )
        {

        }
        // check to see if it's an B
        else if
        {

        }
        // check to see if it's an C
        else if
        {

        }
        // check to see if it's an D
        else if
        {

        }
        // otherwise give it an F
        else
        {

        }

        // print letter grade to screen

    }
}
```

- What is the output of this program?

## Multiplication Table For 2

- Write a program that prints the multiplication table for 2.
  1. Notice the pattern in “2 \* something = something”.
  2. Put it in a loop.

```
class MultTable
{
    public static void main( String argv[] )
    {
        // declare variables

        // repeat the step
        int num;
        for( num = 1; num < 10; num++ )
        {
            // write out the pattern

            // print out the pattern to the screen
            System.out.println( "2 * " + num + " = " + rez );
        }
    }
}
```

- What is the output of this program?

## Multiplication Table

- Write a program that prints the multiplication table for numbers 1 to 9. (Hint: Re-use the previous program and add another for loop.)

```
class MultTable
{
    public static void main( String argv[] )
    {
        // declare variables

        // repeat the step

        for(                )
        {
            for(                )
            {
                // write out the pattern

                // print out the pattern to the screen

                System.out.println(                + " = " + rez );
            }
        }
    }
}
```

- What is the output of this program?