CS 160 – Summer 16
Exam 1 Prep

Java...
Java Everywhere!
Declare and assign a float variable called `f` to 9.

```c
float f = 9F;
```
Initialize a Scanner called \texttt{reader} that reads from the keyboard.

Scanner reader = new Scanner (System.in);
Name the five errors in the following code:

```java
public static void main (String [] args){
    String s = "Hello";
    int i = s.charAt('e');
    for (int i = 0; i <= s.length(); i++)
        if (s.charAt(i) == 'a');
            System.out.println("cool it's an a");
    if (s == "Hello")
        s+= " World";
}
// i does cause a compile error:
“error: variable i is already defined in method main(String[])”
```

1. `charAt` takes a number and returns a character, what I should have put was `s.indexOf(some int)`
2. `int i` is redeclared within the for loop.
3. For loop goes one too far. Should have put `i < s.length()` or `i < s.length() – 1`.
4. Semicolon after the if statement inside the for loop.
5. Must check equality of Strings with `.equals` NOT `.equals`. So instead it should be `s.equals("Hello")`;
Read in a double from the Scanner reader and store it into the pre-defined variable d.

d = reader.nextDouble();
Write a for loop that prints each character in the predefined variable String s separated by an ampersand (&) all on the same line.

```java
for (int i = 0; i < s.length(); i++)
    System.out.print(s.charAt(i) + "&");
```
Close the Scanner called `reader`.

```java
reader.close();
```
Use the predefined Scanner **keys** to read and store the following line into the predefined String variable **s**.

Line being read:
Hello World! How’s it going?

s = keys.nextLine();
Write a switch statement based off of the String variable `str`. If `str` equals “Bob” print “Marley”, if `str` equals “Michael” print “Jackson”, if `str` equals “Justin” print “Timberlake”, if `str` is none of those options print `str` “okay then”.

**NOTE:** “miChaeL” and “MICHAEEL” should still print “Jackson”.

```java
switch (str.toLowerCase()){
    case “bob”: System.out.println(“Marley”); break;
    case “michael”: System.out.println(“Jackson”); break;
    case “justin”: System.out.println(“Timberlake”); break;
    default: System.out.println(“okay then”);
}
```
What does the following code print?

```java
char c = '@';
switch (c) {
  case '@': System.out.println("char c = '@'"');
  case '$': System.out.println("char c = '$'"');
  case '4': System.out.println("char c = '4'"');
  case 'u': System.out.println("char c = 'u'"');
  case ' ': System.out.println("char c = ' '"');
  default: System.out.println("char c is not '@', '$', '4', 'u', ' '"');
}
```

char c = '@'
char c = '$'
char c = '4'
char c = 'u'
char c = '
char c is not '@', '$', '4', 'u', ' '
What does the console print based off the following code?

```java
public class Practice {
    public static void main (String [] args){
        String s = “Koala Bears”;
        for (int i = 0; i < s.length(); i+=2)
            System.out.print(s.charAt(i));
    }
}
```

KaaBas
What does the following code print?

```java
for (int l = 0; l > 0; l++)
    System.out.println(l);
```

nothing
Which one of these would not go to the end of String s? (Specify which ones cause errors and which ones are just incorrect (but they compile)?

A. for (int i = 0; i <= s.length(); i++)
B. for (int i = 0; i < s.length()+1; i++)
C. for (int i = 0; i < s.length(); i++)
D. for (int i = 0; i <= s.length() - 1; i++)
E. for (int i = 0; i < s.length() - 1; i++)

A gives an error (goes one more)
B gives an error (goes one more)
C is correct
D is correct
E is incorrect only goes to the second to the last index
Write a do-while loop that will add the sum of all numbers from 0 - 19.

```c
int count = 0;
int sum  = 0;
do{
    sum += count;
    count++;
}while(count < 20);
```
1. No L following the long value.
2. double is a reserved keyword, I would not be able to name my method double.
3. Counter is declared within the for loop, not a valid return variable.
4. hola has never been declared, if I wanted to print hola, I would need to place quotes around the word, or declare it as a variable somewhere else.