IB Computer Science **Name** :_____(3 points)

Spring: Exam 1

1) Write a Java class that prints the following. (10 points)

```
Hola mundo!
```

```
public class Halo{
  public static void main(String[] args){
    System.out.println("Hola Mundo!")


##This is how we start a class and the main methods with no return type
and print the words a with " ".
```

2) Write a method named "counter" that takes two integers, A and B, and prints the numbers from A to B. (20 points)

```
    public static void counter(int a, int b){
  if (a<b){
  for(int i=a ; i<=b ; i++){
    System.out.println(i);}}
  else{
    for(int i=b ; i<=a ; i++){
     System.out.println(i);}}


##Here we are setting a no return type method so we type it with "void" and
we set 2 arguments with int a&b, next we use if else for the case that when a is greater than b,
last we set a for loop to count the number in range a&b one by one by i.
```

3) Write some Java code that will fill an array with the numbers from 10 to 100. (20 points)

```
int[] arr = new int[91]{
for(int i=10 ; i<101 ; i++){
arr[ i-10 ] = i}}

##Here we create an array with 91 spaces, and we set a  for loop to fill in numbers 10-100.
```

4) Write a method named "average" that will return the average value of an integer array.
It should return a double. (20 points)

```
public static double average (int[] arr){
int sum = 0
for( int i=0 ; i<arr.length ; i++);
sum = sum + sum[ i ];
return ((double)sum/arr.length)}
}

##We have set the return type of this method is double, and set an array named "arr",
next we set a integer "sum" with the value is 0, after that we use a for loop the find
every number and put the in "sum" one by one and add they together, so after we
got the sum we return the answer with the sum divided by the number in "arr"
to find out the average, and we need to type "double" before the sum because
we do not know what answer we may got, for keeping the answer in accurate so
we need to show the decimal places.
```

5) Draw the truth table for OR and XOR. (10 points)

```
OR T F   XOR T F
   T T T         T F T
   F T F         F T F
```

6) Write a method for the XOR operator named "xor". It should take two booleans as arguments and return a boolean. (20 points)

```
 public static boolean xor (boolean a, boolean b){
 if( a==b );{
 return false}
 else {return true};}

 ##Here we are using boolean for our return type and set the argument boolean a&b,
  after that we use if else to show the answer, following the rules of Xor, when a and b
  are the same the answer will be false, then all the others will be true.
```

7) Explain how to compile and run a program "hello.java" from the command line. (10 points)

```
javac hello.java
java hello

##Javac means java compile and this is the how we do.
```