Final Exam

1 message

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Final Exam

Your email (**212370006@gift.edu.pk**) was recorded when you submitted this form.

What will be the result of the following arithmetic expression?

10 + 32 / 3 / 5.0?

*

3/5.0=0.6
0.6/32=2.13

10+2.13=12.13

The force of insect, F, is given by a formula in which a constant, C, is multiplied by the product of the two directions of wind (w1 and w2). This is then divided by the square of the pressure, P, between the two sides. Assuming these variables are declared, and have proper initial values where necessary, write down a Java statement to compute the value of F.

Note: Just write the code in the problem statement

*

F=(c*(w1*w2))/Math.pow(P,2)

State which of the following are valid variable names or not. In case the name is not valid, explain why?

1.
int _XYZ;

2.
String public;

3.
int 7xy;

*

1. Underscore is not allowed in the start of variable name.
2. Public could not b used for variable name because it is used in the built in libraries that can cause problem.
3.integer value could not come in the start of variable name .. against the rule

What is the output of following piece of code?

```
int i = 0;
while(i < 6)
      i = i + 1;
System.out.println(i);
```

*

6

What is the output of following piece of code if we change the LCV update statement to i = i + 4 ?

```
int i = 0;
while(i < 30)
{
    if(i % 10 == 0){
            System.out.println(" _ ");
    }//if
    i = i + 3;
    if(i % 2 == 0){
            System.out.print(i);
             System.out.print(">>>");
     }//if
}//while
```

*

6>>>12>>>18>>>24>>>30>>>

The following program contains errors. Correct them so that the program will correctly run and prints the output.

```
int[] array = {1,2,3,4,5};
for(int i = 0; i <= array.length(), +i;)
       System.out.print(array[i]);
```

*

```
public class MyClass {
    public static void main(String args[]) {
    int[] array = {1,2,3,4,5};
for(int i = 0; i <= array.length-1; ++i)
        System.out.print(array[i]);
    }
}
```

output:
12345

Suppose we have an array named arr of type double with 10 values stored in it. Write a statement that adds the first 4 elements of arr, divides them with 4 and store it as 6th element of array.

*

```
import java.util.Scanner;
public class MyClass {
   public static void main(String args[]) {
   double[] arr = {1.0,2.0,3.0,4.0,5.0,6.0,7.0,8.0,9.0,10.0};
       double i,y;
       y=0;

       for (i = 0; i < arr.length; i++) {
            if (i<=4){
               y+=i;
            }
      }
      y=y/4;

      arr[6]=y;
   }
}
```

Consider the following program segment:

```
int i = 10;
int a = 1;
while(i > 5) {
a = a + i;
i--;
}//while
```

What is the output of “a” at each iteration:

*

i=10
a=11
i=9
a=20
i=8
a=28
i=7
a=35
i=6
a=41

Write input validation code using the while loop for the following statements:

a) Age must be older than 18
b) Make sure the number of ordered pizza is between 1 and 5

*

```
import java.util.Scanner;
public class MyClass {
   public static void main(String args[]) {
     Scanner keyboard = new Scanner(System.in);
   System.out.print("Enter age greater than 18: ");
   int number = keyboard.nextInt();
    while (number > 18) {
     System.out.println("That age is less than 18.");
     System.out.print("Enter age greater than 18: ");
     number = keyboard.nextInt();
   }
   System.out.print("Pizza range between 1 to 5: ");
   int pizza= keyboard.nextInt();


   while (pizza < 1  pizza > 5) {
     System.out.print("Pizza range between 1 to 5: ");
     pizza = keyboard.nextInt();
   }
   }
}
```

The following program contains errors. Correct them so that the program will run and output z = 25.

```
final int mul = 3;
int a, b; c, int z;
c = 79;
if (c < 100);
a = 10;
b = 5,
else
a = 5;
b = 10,
z = a + b * mul;
System.out.println("z = " + z);
```

*

```
 final int mul = 3;
int a, b, c, z;
c = 79;
if (c < 100){
   a = 10;
b = 5;
}

else{
  a = 5;
b = 10;
}

z = a + b * mul;
System.out.println("z = " + z);
```

Write a program that return true if the reminder is 3 when argument is divided by 4.

*

```
 int n = 12;
   int div = 4;
   int result = n%div;
   if(result == 3 ){
      System.out.println("true");
   }
   else{
      System.out.println("false");
   }
```

Suppose we have the following code. Complete the loop below so that it counts the number of prime integers in the array. Just write the for loop.

```
int[] array = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};

int primeCount = 0;
for(int i=0; i < array.length; i++ ) {
    //CODE TO BE WRITTEN
i}//for
System.out.println("Count of prime integers are: " + primeCount);
```

*

```
 int[] array = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};

int primeCount = 0;
for(int i=0; i < array.length; i++ ) {
   if(i%2==1){
      primeCount++;
   }
}//for
System.out.println("Count of prime integers are: " + primeCount);
```

We have data stored in two array a and b. Both of these arrays have the same length. We want to store in a third array c the sum of the corresponding elements of these two arrays. For example (please note that this is just an example) if we had the following arrays:

Array 1 (a):
8 5 6 9 12 5

Array 2 (b)
2 8 9 9 13 10

then the resultant array (c) would be:
10 13 15 18 25 15

You are asked to complete the code given below. Add method parameters for sumArrays method

```
public static void sumArrays( _____){









}//sumArrays
 public static void main(String[] args){
      //Create int array named a of size 5 with values 5,2,9,3,1


      //Create int array named b of size 5 with values 2,5,6,9,10
```

```
    // Create another int array named c of size 5

    //Call the method sumArray

    //print the array c



}//main
```

*

```
public static void sumArrays(int[] array1, int[] array2){
    int[] array3 = {};
  for(int i = 0; i<= array1.length; ++i){
     for(int j = 0; j<=array2.length; ++j){
        array3[i] = array1[i]+array2[j];
     }
  }
  return array3;
```

Write a method that returns the index of the nth square value occurrence of an integer value in an integer array. That is, the method searches for the square of the given value for its nth occurrence, where n could be any integer >= 1. If that square value does not occur n times, the method returns an index of -1.

You may use the following header for this method. Inside method count the square of value and if equal to occurrence than return index else -1:
public static int getNthSquareIndex(int[] array, int occurrence, int value)

For example, the method call:
    int index = getNthSquareIndex(array, 4, 100);

Searches for the 4th occurrence in the array for the value 100. If found, the index of the found value is returned, otherwise -1 is returned.

*

```
import java.util.Scanner;
public class MyClass {
   public static void main(String args[]) {
     Scanner keyboard = new Scanner(System.in)
}
}
```