**Chapter\_3 - Lab Assignments**

**Programming Output**

For each of the given program segments, read the code, and write the output in the space provided below each program. [Note: Do not execute these programs on a computer.]

**1. What is the output of the following program?**

**1** public class Operator {

**2**

**3** public static void main( String args[ ] )

**4** {

**5** int x = 30;

**6** int y = 2;

**7**

**8** System.out.println( x \* y + 9 / 3 );

**9** }

**10** }

**Your answer:**

63

**2. What is output by the following line of code?**

**System.out.println( ( 8 \* 4 \* 2 + 6 ) / 2 + 4 );**

**Your answer:**

39

**3.** What is output by the following program for each of the input values 5, 7, 100, –7 and 0?

**1** import java.util.Scanner;

**2**

**3** public class Output

**4** {

**5** public static void main( String args[ ] )

**6** {

**7** int number;

**8** Scanner input = new Scanner( System.in );

**9**

**10** System.out.println( "Enter integer: " );

**11** number = input.nextInt();

**12**

**13** if ( number != 7 )

**14** System.out.print( "Welcome " );

**15**

**16** if ( ( number % 5 ) == 0 )

**17** System.out.println( "To Java Programming" );

**18** }

**19** }

**Your answer:**

Enter integer: (5) Welcome To Java Programming

Enter integer: (7) “Nothing”

Enter integer: (100) Welcome To Java Programming

Enter integer: (-7) Welcome

Enter integer: (0) Welcome To Java Programming

**4. What is output by the following program? Assume the user enters 12 for one execution of the program and 15 for a second execution.**

**1** import java.util.Scanner;

**2**

**3** public class Compares

**4** {

**5** public static void main( String args[] )

**6** {

**7** int integer;

**8** Scanner input = new Scanner( System.in );

**9**

**10** System.out.println( "Enter an integer:" );

**11** integer = input.nextInt();

**12**

**13** if ( ( integer % 6 ) == 0 )

**14** System.out.println( "Hello" );

**15** else

**16** System.out.println( "Good Bye" );

}

}

**Your answer:**

Enter an integer - (12) Hello

Enter an integer – (6) Hello

Enter an integer - (15) Good bye

**40. What is output by the following program?**

**5. What is output by the following program?**

**1** public class Compares

**2** {

**3** public static void main( String args[] )

**4** {

**5** int x = 3;

**6** int y = 9;

**7** int z = 77;

**8**

**9** if ( z == 77 )

**10** System.out.print( "H" );

**11**

**12** if ( z == 99 )

**13** System.out.print( "M" );

**14**

**15** if ( z < x )

**16** System.out.print( "J" );

**17**

**18** System.out.print( "E" );

**19**

**20** if ( y == ( x \* x ) )

**21** System.out.print( "LL" );

**22**

**23** System.out.print( "O" );

**24**

**25** if ( x == y )

**26** System.out.print( "W" );

**27** }

**28** }

**Your answer:**

Hello

**6. What is output by the program in Exercise 5 when x = 11, y = 121 and z = 10?**

**Your answer:**

Jello

**7. What is output by the program in Exercise 5 when x = 5, y = 25 and z = 99?**

**Your answer:**

Mello

**8. What is output by the program in Exercise 5 when x = 10, y = 9 and z = 8?**

**Your answer:**

Jeo

**9. What is output by the program in Exercise 5 when x = 10, y = 10 and z = 99?**

**Your answer:**

Meow

Section: **Correct the Code**

Determine if there is an error in each of the following program segments. If there is an error, specify whether it is a logic error or a compilation error, write the error in the program and write the corrected code in the space provided after each problem. If the code does not contain an error, write “no error.” [Note: There may be more than one error in each program segment.]

**10. The following program should input the value of an integer into variable num:**

**1** import java.Scanner;

**2**

**3** public class Output {

**4**

**5** public static void main( String args[] )

**6**

**7** int num

**8** Scanner input = Scanner( in );

**9**

**10** num = input.int();

**11** }

**12** }

**Your answer:**

**import** java.util.Scanner;

**public** **class** Output {

**static** java.util.Scanner *input* = **new** java.util.Scanner(System.*in*);

**public** **static** **void** main( String args[] ) {

System.*out*.print("Enter an integer: ");

**int** num = *input*.nextInt();

Scanner input = **new** Scanner (System.*in*);

}

}

**11. The following segment of code should declare an int variable number and assign the value of the expression (5 + 3) \* 2 to the variable:** *Make a corrections*

**1** int number;

**2** number = 5 + 3 \* 2;

**Your answer:**

**import** java.util.Scanner;

**public** **class** Test {

**static** java.util.Scanner *input* = **new** java.util.Scanner(System.*in*);

**public** **static** **void** main( String args[] ) {

**int** number;

number = (5 + 3 \* 2);

System.*out*.print(number);

}

}

**12. The following code should determine whether variable *q is equal to 100*:**

*Make a corrections*

**1** int q = 100;

**2**

**3**

System.out.print( "q is" );

**4**

**5** if ( q = 100 )

**6** System.out.print( " equal to 100" );

if ( q ! 100 )

System.out.print( " not equal to 100" );

**Your answer:**

**public** **class** Test {

**public** **static** **void** main( String args[] ) {

**int** q = 100;

System.*out*.print( "q is" );

**if** (q == 100)

System.*out*.print( " equal to 100" );

**if** ( q != 100)

System.*out*.print( " not equal to 100" );

}

}

**13. The following code segment should determine whether an integer variable’s value is less than zero.** *Make a corrections*

**1** int x = 9;

**2**

**3** if ( x < 0 );

**4** System.out.println( "Variable x is less than zero" );

**Your answer:**

**import** java.util.Scanner;

**public** **class** tester {

**public** **static** **void** main(String[] args) {

**int** x = 9;

**if** ( x < 0 );

System.*out*.println( "Variable x is less than zero" );

}

}

**14. The following program should output the integer value entered by the user:**

*Make a corrections*

**1** import java.util.Scanner;

**2**

**3**

public class Display

**4** {

**5** public static void main( String args[] )

**6** {

**7** int num1;

**8** Scanner input = new Scanner( System.in );

**9**

**10** System.out.println( "Enter first integer:" );

**11**

**12** Scanner.nextInt( num1 );

**13** System.out.println( num1 );

**14** }

**import** java.util.Scanner;

**public** **class** Test {

**static** java.util.Scanner *input* = **new** java.util.Scanner(System.*in*);

**public** **static** **void** main( String args[] ) {

System.*out*.print("Enter an integer: ");

**int** num = *input*.nextInt();

Scanner input = **new** Scanner (System.*in*);

System.*out*.println(num);

}

}

**15** }

**Your answer:**

**15. The following code should compare two integers to determine if they are not equal.**

**1** int x = 9;

**2** int y = 3;

**3**

**4** if ( x =! y )

**5** System.out.println( "Variable x and y are not equal" );

**Your answer:**

Variable x and y are not equal

**16. What does the following code print?**

System.out.printf( "%s\n%s\n%s\n", "\*", "\*\*\*", "\*\*\*\*\*" );

**Your answer:**

\*

\*\*\*

\*\*\*\*\*

**17. What is the printout of the following switch statement?**

char ch = 'c';

switch (ch) {

case 'a':

System.out.print(ch);

case 'b':

System.out.print(ch);

case 'c':

System.out.print(ch);

case 'd':

System.out.print(ch);

}

**Your answer:**

cc

**18.** Assume that x is **3**. Show the result of the following Boolean expressions.

(true) && (3 > 4) **Result is:** \_\_\_\_\_True\_\_\_\_\_\_\_\_\_

! (x > 5) && (x > 0) **Result is:** \_\_\_\_\_True\_\_\_\_\_\_\_\_\_

(x != 5) | | (x = = 0) **Result is:** \_\_\_\_\_False\_\_\_\_\_\_\_\_\_

(x >= 0) | | (x < 0) **Result is:** \_\_\_\_\_\_False\_\_\_\_\_\_\_\_\_

(x != 2) = = (x = = 4) **Result is:** \_\_\_\_\_\_False\_\_\_\_\_\_\_\_\_

**19.** What is y after the following switch statement?

int x = 0;

int y = 0;

int z = 0;

switch (x + 1) {

case 0: y = 0;

case 1: y = 1;

case 2: z = 2;

default: y = -1;

}

**Your answer:**

I got nothing as a result

**public** **class** tester {

**public** **static** **void** main(String[] args) {

**int** x = 0;

**int** y = 0;

**int** z = 0;

**switch** (x + 1) {

**case** 0: y = 0;

**case** 1: y = 1;

**case** 2: z = 2;

**default**: y = -1;

}

}

}

**20.** What is y after the following switch statement?

class Switch1{

   public static void main(String args[ ]) {

      int k = 10;

      switch(k){

         case 5: System.out.println(" case k = 5");

         break;

         case 10: System.out.println(" case k = 10");

         break;

         case 15: System.out.println(" case k = 15");

         break;

         default: System.out.println(" case default");

      }

   }

}

**Your answer:**

case k = 10