

Lab7

Programming Fundamentals (CS-130-02)

CS 130-02 FA22

Total=100

[1] Which of the following loops will execute the body of loop even when condition controlling the loop is initially false?

A. do-while

B. while

C. for

D. none

[2] Which control structure allows selection of specific sections of code to be executed

A. decision control structures(if, else, switch)

B. repetition control structures(while, do-while, for)

C. branching statements(break, continue, return)

[3] How do you write a Conditional OR operators in Java?

A. or

B. ||

C. !

D. ^

[4] How do you write a Conditional AND operators in Java?

A. &

B. and

C. &&

D. ||

[5] How do you write a Not equal Relational operator in Java?

A. !=

B. =!

C. !==

D. !!=

[6] How do you write a Equal to Relational operator in Java?

A. ===

B. Equal

C. ==

D. =

[7] Decide if the Boolean expression evaluates to true or false. Given:

a = 1, b = 0, c = 3

a != c

A. true

B. false

[8] Which control structure allow executing specific sections of code a number of times

A. decision control structures(if, else, switch)

B. repetition control structures(while, do-while, for)

C. branching statements(break, continue, return)

[9] What is the output?

```
int grade = 58;
if(grade > 60) {
    System.out.println("Congratulations!");
    System.out.println("You passed!");}
```

A. "Congratulations!"

"You passed!"

B. Congratulations!

You passed!

C. Not printing anything

D. Congratulations

[10] What is the output?

```
int grade = 68;
if(grade > 60)
    System.out.println("Congratulations!");
else
    System.out.println("Sorry you failed");
```

A. "Congratulations!"

"Sorry you failed"

B. Congratulations!

C. Sorry you failed

[11] You can have other if-else inside another if-else block

A. if-else statement

B. else-if statement

C. nested if-else blocks

D. if-statement

[12] What is the output?

```
int grade = 68;
if(grade > 60)
    System.out.println("Congratulations!");
```

```
System.out.println("You passed!");  
  
else  
  
System.out.println("Sorry you failed");
```

A. Congratulations!

You passed!

B. Congratulations!

C. Sorry you failed

D. Syntax Error

[13] Which of the following will be the output of the above program?

```
public class Compute {  
  
int result, x ;  
  
x = 1 ;  
  
result = 0;  
  
while (x <= 10) {  
    if (x%2 == 0)  
        result += x ;  
    x++;  
}  
  
System.out.println(result) ;}
```

A. 55

B. 30

C. 25

D. 35

[14] What is the output?

```
int grade = 92;  
switch(grade) {  
case 100:  
System.out.println("Excellent!");  
break;  
case 90:  
System.out.println("Good job!");  
break;  
case 80:  
System.out.println("Study harder!");  
break;  
default:  
System.out.println("Sorry you failed");
```

A. Excellent

B. Good job!

C. Study harder!

D. Sorry you failed

[15] What is the Output?

```
int x=0;
while(x<10)
{
    System.out.print(x);
    x++;
}
```

A. 0

1

2

3

4

5

6

7

8

9

B. 0123456789

C. 012345678910

D. 0

[16] what is the output?

```
while(true) {
    System.out.println("hello");
}
```

A. hello hello hello

B. hello

C. compile error

D. infinite loop hello

[17] what is the output?

```
while(false) {
    System.out.println("hello");
}
```

A. hello hello hello

B. hello

C. compile error

D. infinite loop hello

[18] what is the output?

```
do {  
  
    System.out.println("hello");  
  
}while (true);
```

- A. hello hello hello
- B. hello
- C. compile error
- D. infinite loop hello

[19] What is the output?

```
int x = 0;  
do {  
    System.out.println(x);  
    x++;  
}while(x<10);
```

- A. 0123456789
- B. 0
1
2
3
4
5
6
7
8
9
- C. 012345678910

- D. 0
1
2
3
4
5
6
7
8
9
10

[20] what is the output?

```
do {  
  
    System.out.println("hello");  
  
}while (false);
```

- A. hello hello hello
- B. hello
- C. compile error
- D. infinite loop hello

[21]terminates the enclosing switch statement, and flow control transfers to the statement immediately following the switch

- A. break
- B. continue
- C. return
- D. exit

[22] What do you call a statement that executes a certain statement or statements if the condition is true, and executes a different statement or statements if the condition is false?

- A. An if statement.
- B. An if-else statement.
- C. An if-else-if statement.
- D. The switch statement.

[23] What is a part of a switch statement that will execute if there are no values that matched the given choices?

- A. case
- B. break
- C. default
- D. None of the above

[24] What is the data type that can be used in a switch statement?

- A. double data type.
- B. float data type.
- C. char data type.
- D. String data type.

[25] What is a java keyword used in switch statements that causes immediate exit or that terminates the switch statement?

- A. The case keyword.
- B. The switch keyword.
- C. The default keyword.
- D. The break keyword

[26] In the given switch statement, what will be displayed if the value of var is 5?

```
switch(var)
{
case 1: System.out.println("Hello\n");
break;
case 2: System.out.println("World!\n");
break;
case 3: System.out.println("Happy\n");
case 4: System.out.println("Programming\n");
case 5: System.out.println("Thanks!\n");
break;
default : System.out.println("Congratulations!\n");
break;}
```

- A. Thanks!
Congratulations!
- B. Congratulations!
- C. Hello
- D. Thanks!

[27] In the given switch statement, what will be displayed if the value of var is 3 in previous program?

- A. Happy
- B. Happy
Programming
Thanks
- C. Happy
Programming
- D. Congratulations!

1. Write a program that will prompt the user for the capacity of their gas tank and the amount of gas they have left. Your program will determine what percentage of gas is left in the tank (level) and print an appropriate message.

level = amount/capacity

- level less than a quarter (<.25) of a tank
- level less than a half (<.50) of a tank
- level less than three quarters (<.75) of a tank
- almost a full tank

```

1 import java.util.Scanner;
2 import java.text.NumberFormat;
3
4 public class Lab7_Q1 {
5
6     public static void main(String[] args) {
7         // TODO Auto-generated method stub
8         Scanner scan = new Scanner(System.in);
9         System.out.println("Enter your current amount of gas: ");
10        float amount = scan.nextFloat();
11        System.out.println("Enter the total capacity for your tank: ");
12        float capacity = scan.nextFloat();
13
14        float level = amount / capacity;
15
16        NumberFormat fl = NumberFormat.getPercentInstance();
17
18        System.out.println("The current level is: " + fl.format(level));
19        if (level < .25) {
20            System.out.println("You are running low on gas, it is below 25%");
21        } else if (level < .5) {
22            System.out.println("Your gas is starting to get a little low, it is below 50%");
23        } else if (level < .75) {
24            System.out.println("Your gas is fine for now, you are below 75%");
25        } else {
26            System.out.println("Gas is perfectly fine! It's between 75 and 100%");
27        }
28    }
29
30 }
31

```

2. Write a program that prompts the user for an employee number that starts with 100, 200, 300, or 400. Then, based on the number it classifies the employee. If the employee number doesn't start with any of those four numbers, then you should print "Invalid Employee" Below is a list of the classifications and sample run:

100 - General Manager
200 - Supervisor
300 - Staff
400 - Contractor
Anything else - Invalid category.


```

1  import java.util.Scanner;
2
3  public class Lab7_Q2 {
4
5      public static void main(String[] args) {
6          // TODO Auto-generated method stub
7          Scanner scan = new Scanner(System.in);
8          System.out.println("Enter employee number: ");
9          int eNum = scan.nextInt();
10
11          switch (eNum) {
12              case 100:
13                  System.out.println("General Manager");
14                  break;
15
16              case 200:
17                  System.out.println("Supervisor");
18                  break;
19
20              case 300:
21                  System.out.println("Staff");
22                  break;
23
24              case 400:
25                  System.out.println("Contractor");
26                  break;
27
28              default:
29                  System.out.println("Invalid Employee");
30                  break;
31          }
32      }
33
34  }
35

```

3. Write a program that reads an integer value representing a year from the user. A year is leap, if it is divisible (by 4 and not by 100) or by 400. Take user input of a year and check it whether its leap year or common year. Use And , OR logic with in IF and Else conditions.

```
1 import java.util.Scanner;
2
3 public class Lab7_Q3 {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner scan = new Scanner(System.in);
8         System.out.println("Enter the year: ");
9         int year = scan.nextInt();
10
11         if (year % 4 == 0 || year % 400 == 0) {
12             System.out.println("The year " + year + " is a leap year");
13         } else {
14             System.out.println("The year " + year + " is not a leap year");
15         }
16     }
17
18 }
19
```