

### ESET 269 Assignment #3

1) You are writing a program that needs to repeatedly print the current count, increment the count, and check if the count has reached a maximum value entered by the user. This should continue as long as the count is less than the maximum value.

Which loop should you use to implement this?

A) while loop

B) do-while loop

C) either while or do-while loop

2) Why does the following switch statement produce a syntax error?

```
char *command = "start";
```

```
switch(command) {  
    case "start":  
        printf("Starting...\n");  
        break;
```

```
    case "stop":  
        printf("Stopping...\n");  
        break;
```

```
    default:  
        printf("Invalid command\n");  
}
```

Strings are not allowed as the switch quantity in C++ so a syntax error occurs.

3) What will happen when the following code is executed?

```
#include <stdio.h>
```

```
int main() {  
    int i;
```

```
    for (i = 0; i < 10; i++) {  
        if (i == 5) {  
            break;  
        }  
        printf("%d\n", i);  
    }
```

```
    return 0;  
}
```

- A. The code will print the numbers from 0 to 9.
- B. The code will print the numbers from 0 to 4.**
- C. The code will print the numbers from 5 to 9.
- D. The code will not print anything.

4) Write a C program to print multiples of 3 or 5 present in 1 to 50 using a while loop.

5) Write a C program which takes integers 1 to 7 from the user and prints the day of the week for a given number(Use switch-case).

6) What are the minimum and maximum index values of an array with 100 elements in C?

- a. 1 and 100
- b. 0 and 100
- c. 1 and 99
- d. 0 and 99**

7) X is an array of 6 elements, and Y is an array of 20 elements. Which code will assign the value of the 4<sup>th</sup> element of X to the last element of Y?

- a. `x[4]=y[20]`
- b. `x[3]=y[20]`
- c. `x[19]=y[3]`
- d. `x[3]=y[19]`**

8) Fill in the following code according to the comments

```
int main() {
    char str[100]; // Declare a character array to store the string
    int count = 0; // Initialize a variable to count characters
    int i = 0;     // Initialize an index variable for the while loop

    printf("Enter a string: ");
    scanf("%s", str); // Read the string from the user

    // Calculate the number of characters in the string using a while loop
    while () // Continue until the null character '\0' is encountered
    {
        while (str[i] != '\0')
        {
            i++;
        }
        printf("%d", i);
        return 0;
    }
}
```

9) Write a program that: has an empty array of size 5. Prompt user to enter values to store in the array. Print the final array. Use For loop in your code.

10) Given the following 2D array, write a while loop to replace each value in last row to -10.

```
float array[2][3]={{2,0.2,1},{3,9,1}}
```

```
int main()
{
    int x=0;
    float array[2][3]={{2,0.2,1},{3,9,1}};
    float m = -10.00;
    while (x<3)
    {
        array[1][x] = m;
        x++;
    }

    printf("%.2f\n",array[0][0]);
    printf("%.2f\n",array[0][1]);
    printf("%.2f\n",array[0][2]);

    printf("%.2f\n",array[1][0]);
    printf("%.2f\n",array[1][1]);
    printf("%.2f\n",array[1][2]);

    return 0;
}
```