East West University

Department of Computer science and Engineering

Course Code: CSE103- Structured Programming (LAB)

Section No: 03

Lab Exercise: 02

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Lab2Task1_080.c

```c
#include<stdio.h>

int main()
{
    float sale, pay = 200;
    printf("Enter the sales: $");
    scanf("%f", &sale);

    if(sale < 5000){
        pay = pay + ((sale*9)/100);
    }
    else{
        pay = pay + ((sale*15)/100);
    }
    printf("The earning is: $%.2f", pay);

    return 0;
}
```

```
"D:\EWU Books And Files\10th Semester\CSE 103\Lab2\Lab2Task1_080.exe"
Enter the sales: $2000
The earning is: $380.00
Process returned 0 (0x0)   execution time : 3.267 s
Press any key to continue.
```

*Lab2Task2_080.c

```c
#include<stdio.h>
int main()
{
    float interest, principal, rate;
    int days;

    printf("Enter the principal: ");
    scanf("%f", &principal);

    printf("Enter the rate: ");
    scanf("%f", &rate);

    printf("Enter the day(s): ");
    scanf("%d", &days);

    if(principal > 0 && principal <= 10000){
        if(rate==20){
            interest = principal * (rate / 100) * ((float)days / 365.0);
        }
        else
            printf("The interest rate will be 20%");
    }
    else if(principal >= 10001 && principal <= 50000){
        if(rate==17){
            interest = principal * (rate / 100) * ((float)days / 365.0);
        }
        else
            printf("The interest rate will be 17%");
    }
    else if(principal >= 50000){
        if(rate==15){
            interest = principal * (rate / 100) * ((float)days / 365.0);
        }
        else
            printf("The interest rate will be 15%");
    }
    printf("The amount of interest is: %f", interest);
    return 0;
}
```

```
"D:\EWU Books And Files\10th Semester\CSE 103\Lab2\Lab2Task2_080.exe"
Enter the principal: 20000
Enter the rate: 17
Enter the day(s): 30
The amount of interest is: 279.452057
Process returned 0 (0x0)   execution time : 21.838 s
Press any key to continue.
```

Lab2Task3_080.c

```c
#include<stdio.h>
int main()
{
    int num, temp, r, sum = 0;
    printf("Enter the number: ");
    scanf("%d", &num);

    temp = num;
    while(temp != 0){
        r = temp % 10;
        sum = sum * 10 + r;
        temp = temp / 10;
    }
    if(sum == num){
        printf("The number is palindrom.\n");
    }
    else{
        printf("The number is not palindrom.\n");
    }
    return 0;
}
```

```
"D:\EWU Books And Files\10th Semester\CSE 103\Lab2\Lab2Task3_080.exe"
Enter the number: 11611
The number is palindrom.

Process returned 0 (0x0)   execution time : 15.482 s
Press any key to continue.
```

Lab2Task4_080.c

```c
#include<stdio.h>
int main()
{
    int num, i, s;
    printf("Enter the number: ");
    scanf("%d", &num);
    for (i=2; i<num; i++){
        s = num % i;
        if(s == 0){
            break;
        }
        else{
            continue;
        }
    }
    if(s == 0){
        printf("The number is not a prime.");
    }
    else{
        printf("The number is a prime.");
    }
    return 0;
}
```

```
"D:\EWU Books And Files\10th Semester\CSE 103\Lab2\Lab2Task4_080.exe"
Enter the number: 17
The number is a prime.
Process returned 0 (0x0)   execution time : 2.161 s
Press any key to continue.
```

Lab2Task5_080.c

```c
#include<stdio.h>
int main()
{
    int m, n, sum = 0, i, j, a, b, c, h = -10;
    printf("Enter m and n: ");
    scanf("%d %d", &m, &n);
    for(i=1; i<=m; i++){
        printf("Enter the marks for student %d: ", i);
        scanf("%d %d %d", &a, &b, &c);
        sum = a + b + c;
        printf("Total marks for student %d: %d\n", i , sum);
        if(sum > h){
            h = sum;
        }
    }
    printf("Highest total marks: %d", h);
    return 0;
}
```

"D:\EWU Books And Files\10th Semester\CSE 103\Lab2\Lab2Task5_080.exe"

```
Enter m and n: 3 3
Enter the marks for student 1: 90 80 60
Total marks for student 1: 230
Enter the marks for student 2: 70 90 90
Total marks for student 2: 250
Enter the marks for student 3: 50 60 70
Total marks for student 3: 180
Highest total marks: 250
Process returned 0 (0x0)   execution time : 36.367 s
Press any key to continue.
```

Lab2Task6_080.c

```c
#include <stdio.h>

int main() {
    int rows, i, j, k;
    printf("Input number of rows (half of the diamond): ");
    scanf("%d", &rows);

    for (i = 1; i <= rows; i++) {
        for (j = i; j < rows; j++) {
            printf(" ");
        }
        for (k = 1; k <= (2 * i - 1); k++) {
            printf("*");
        }
        printf("\n");
    }

    for (i = rows - 1; i >= 1; i--) {
        for (j = rows; j > i; j--) {
            printf(" ");
        }
        for (k = 1; k <= (2 * i - 1); k++) {
            printf("*");
        }
        printf("\n");
    }

    return 0;
}
```

```
"D:\EWU Books And Files\10th Semester\CSE 103\Lab2\Lab2Task6_080.exe"
Input number of rows (half of the diamond): 5
    *
   ***
  *****
 *******
*********
 *******
  *****
   ***
    *

Process returned 0 (0x0)   execution time : 1.422 s
Press any key to continue.
```