United International University (UIU)

Dept. of Computer Science and Engineering (CSE)

Class Test # 3 Year: **2023** Semester: **Spring**

Course: **CSE 1111** Title: **Structured Programming Language (Sec – A/V)**

Marks: **20** Time: **30 minutes**

1

Name:…….. **ID:** ……

Q.1 Write a C program to perform the following operations: **[10]**

i) Create a user defined function called **int digitPosition(int number)** , that will find the second digit of the number from the left side and returns it.

ii) In the **main()** function, read an integer number of ***at least two digits*** from the keyboard and send that number to the user defined function as parameter. Also print the return value from the user defined function.

Answer:

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

int digitPosition(int number){
   int number_of_digits=(int)log10(number)+1;
   int second_digit;
   for(int i=0;i<number_of_digits-1;i++){
      second_digit=number%10;
      number/=10;
   }
   return second_digit;
}

int main() {
   int n;
   scanf("%d",&n);

   int n_of_digits=(int)log10(n)+1;

   if(n_of_digits>=2){
      int pos=digitPosition(n);
      printf("%d",pos);
   }
   else{
      printf("The no of entered digit must be greater than or equal to 2");
   }
   return 0;
}
```

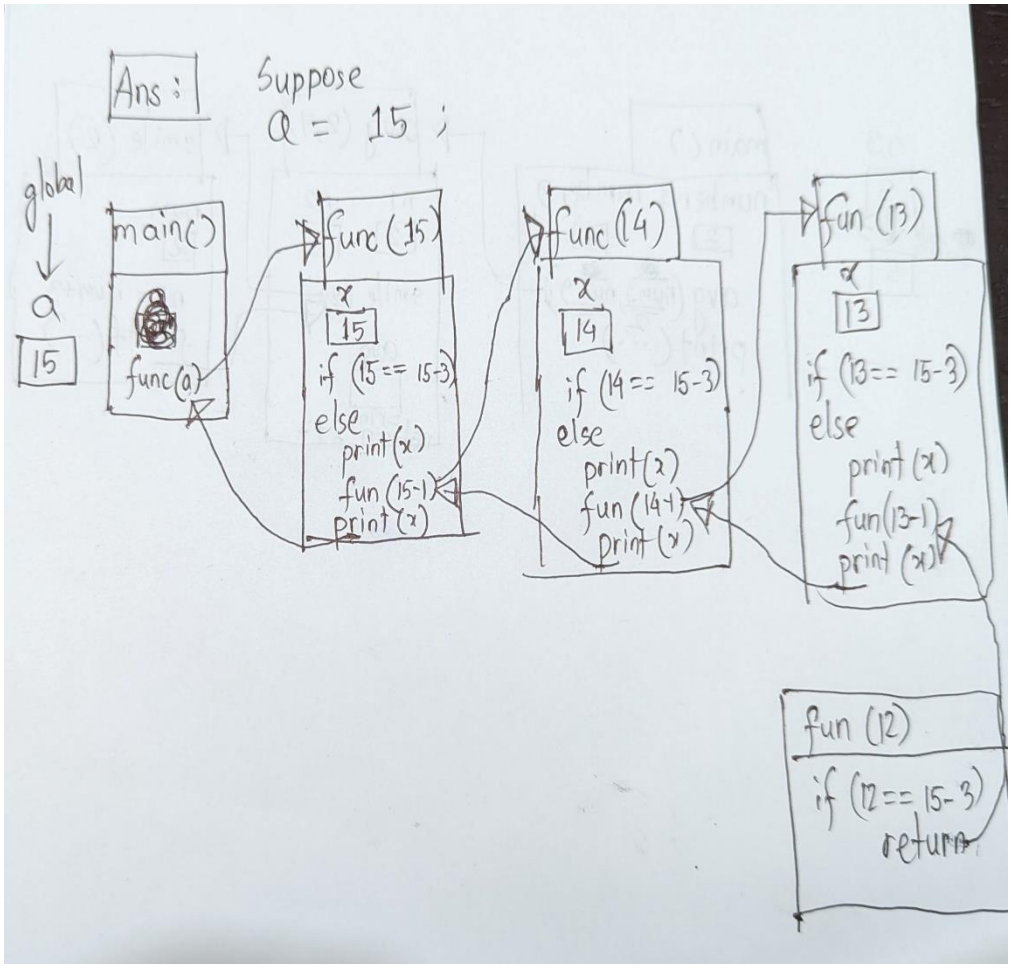
Q.2 **Find the output of the following program:** **[4]**

```
#include<stdio.h>
int a= last_two_digits_of_your_student_id;

void func(int x){
    if (x==a-3) return;

    else
    {
        printf("%d\n", x);
        func(x-1);
        printf("%d\n", x);
    }
}

int main()
{
    func(a);
    return 0;
}
```



Output:

15

14

13

13

14

15

Q.3 **Find the output of the following program:** **[6]**

```
#include <stdio.h>
float n3 = 3;

void smile(float num){
    n3 = num+3;
    printf("Smile.\n");
}

int avg(float n1, float n2){
    smile(n1);
    float avg = (n1+n2+n3)/3;
    printf("avg=%f.\n", avg);
    return n1+n2;
}

void main() {
    float number3 = 2, number9 = 7;
    float number = avg (number3, number9);
    printf("avg = %f and %f\n", n3, number);
}
```

Output:

Smile
avg=4.666667
avg=5.000000 and 9.000000