

## DAY-2

### 1. Find N Fibnocci Numbers by using for loop.

```
rps@rps-virtual-machine: ~/Assignments/Tasks-13May
rps@rps-virtual-machine:~/Assignments/Tasks-13May$ cat fibnocci.c
#include<stdio.h>
int main(){
    int n;
    scanf("%d", &n);
    int a=0,b=1;
    for(int i=0;i<n;i++){
        printf("%d ",a);
        int c=a+b;
        a=b;
        b=c;
    }
    return 0;
}
rps@rps-virtual-machine:~/Assignments/Tasks-13May$ gcc fibnocci.c
rps@rps-virtual-machine:~/Assignments/Tasks-13May$ ./a.out
5
0 1 1 2 3 rps@rps-virtual-machine:~/Assignments/Tasks-13May$
```

### 2. Find the Factorial of a Number?

#### Code:

```
#include<stdio.h>
int main(){
    printf("Enter the Number \n");
    int a;
    scanf("%d",&a);
    int fact=1;
    for(int i=1;i<=a;i++){
        fact=fact*i;
    }
    printf("Factorial of a Number is %d :%d",a,fact);
    return 0;
}
```

#### Output:

```
Enter the Number
5
Factorial of a Number is 5 :120
rps@rps-virtual-machine:~/Assignments/Tasks-13May$
```

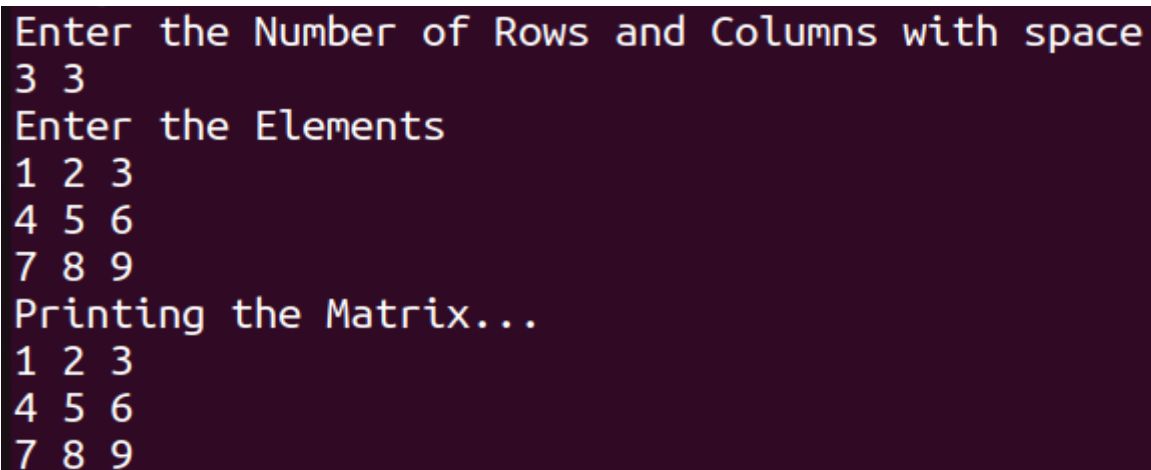
### 3. Take the inputs from the user and print the matrix.

#### Code:

```
#include<stdio.h>
int main(){
    int r,c;
    printf("Enter the Number of Rows and Columns with space\n");
    scanf("%d %d",&r,&c);
    printf("Enter the Elements\n");
    int a[r][c];
    for(int i=0;i<r;i++){
        for(int j=0;j<c;j++){
            scanf("%d",&a[i][j]);
        }
    }

    printf("Printing the Matrix...");
    for(int i=0;i<r;i++){
        for(int j=0;j<c;j++){
            printf("%d ",a[i][j]);
        }
        printf("\n");
    }
}
```

#### Output:



```
Enter the Number of Rows and Columns with space
3 3
Enter the Elements
1 2 3
4 5 6
7 8 9
Printing the Matrix...
1 2 3
4 5 6
7 8 9
```

### 4. Take the inputs from the user and stored into an arrays.

#### Code:

```
#include<stdio.h>
int main(){
    printf("Task:User want to give inputs from console\n");
```

```

    int n;
    printf("Enter the size of array: ");
    scanf("%d", &n);
    int a[n];
    for(int i=0; i<n; i++){
        scanf("%d", &a[i]);
    }
}

```

### Output:

```

Task:User want to give inputs from console
Enter the size of array: 5
1 2 3 4 5

```

## 5. Print all the elements in an array with index Numbers?

### Code:

```

#include<stdio.h>
int main(){
    printf("Task:Print the Array with index Numbers\n");
    int n;
    printf("Enter the size of the array: ");
    scanf("%d",&n);
    int a[n];
    printf("Enter the elements of the array: ");
    for(int i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
    printf("Resultant Array...\n");
    for(int i=0;i<n;i++){
        printf("a[%d] = %d\n",i,a[i]);
    }
    return 0;
}

```

## Output:

```
Task:Print the Array with index Numbers
Enter the size of the array: 5
Enter the elements of the array: 1 2 3 4 5
Resultant Array...!
a[0] = 1
a[1] = 2
a[2] = 3
a[3] = 4
a[4] = 5
```

## 6. Delete a Particular Element in an array.

### Code:

```
#include<stdio.h>
int main(){
    printf("Task:Delete a Particular element in an array\n");
    int n;
    printf("Enter the size of an array\n");
    scanf("%d",&n);
    int a[n];
    printf("Enter the elements of an array\n");
    for(int i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
    int k;
    printf("Enter the element to be deleted\n");
    scanf("%d",&k);
    for(int i=0;i<n;i++){
        if(a[i]==k){
            a[i]=0;
            printf(" Deleted Element is %d at index of %d\n",k,i);
            printf("Updated value from %d index is  %d\n",i,a[i]);
            break;
        }
        else if(i==n-1){
            printf("Element not found\n");
        }
    }
}
```

## Output:

```
Task:Delete a Particular element in an array
Enter the size of an array
5
Enter the elements of an array
1 2 3 4 5
Enter the element to be deleted
45
Element not found
```

## 7. Find Duplicate elements in the array?

### Code:

```
#include<stdio.h>
int main(){
    // int a[20]={1,2,3,4,5,6,7,8,9,10,2,12,13,14,15,16,18,33,3,1};
    printf("Task:Find the duplicate elements in an array\n");
    int n;
    printf("Enter the size of an array\n");
    scanf("%d",&n);
    int a[n];
    printf("Enter the elements of an array\n");
    for(int i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
    int d=0;
    for(int i=0;i<n;i++){
        int c=0;
        for(int j=i;j<n;j++){
            if(a[i]==a[j]){
                c++;
            }
        }
        if(c>1){
            d++;
            printf("%d\n",a[i]);
        }
    }
    if(d==0){
        printf("No duplicate elements\n");
    }
}
```

```
}
```

## Output:

```
Task:Find the duplicate elements in an array
Enter the size of an array
5
Enter the elements of an array
1 2 3 4 5
No duplicate elements
```

## 8. Search a Element in an array

### Code:

```
#include<stdio.h>
int main(){
    printf("Task:Search particular element in an array\n");
    int n;
    printf("Enter the size of an array\n");
    scanf("%d",&n);
    int a[n];
    printf("Enter the elements of an array\n");
    for(int i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
    int k;
    printf("Enter the value to be searched\n");
    scanf("%d",&k);
    int i;
    for(i=0;i<n;i++){
        if(a[i]==k){
            printf("Element found at index %d\n",i);
            break;
        }
        else if(i==n-1){
            printf("Element not found\n");
        }
    }
}
```

## Output:

```
Task:Search particular element in an array
Enter the size of an array
5
Enter the elements of an array
1 2 3 4 5
Enter the value to be searched
5
Element found at index 4
```

## 9. Multiplication of Matrix.

### Code:

```
#include<stdio.h>
int main(){
    int r,c;
    scanf("%d %d",&r,&c);
    int a[r][c];
    printf("Enter the elements of first matrix:\n");
    for(int i=0;i<r;i++){
        for(int j=0;j<c;j++){
            scanf("%d",&a[i][j]);
        }
    }
    printf("Enter the elements of second matrix:\n");
    int b[r][c];
    for(int i=0;i<r;i++){
        for(int j=0;j<c;j++){
            scanf("%d",&b[i][j]);
        }
    }
    // printf("\n");
    int res[r][c];
    printf("Multiplication matrix is:\n");
    for(int i=0;i<r;i++){
        for(int j=0;j<c;j++){
            res[i][j]=0;
            for(int k=0;k<c;k++){
                res[i][j]+=a[i][k]*b[k][j];
            }
            printf("%d ",res[i][j]);
        }
    }
```

```
        printf("\n");
    }
}
```

### Output:

```
3 3
Enter the elements of first matrix:
1 2 3
4 5 6
7 8 9
Enter the elements of second matrix:
1 2 3
4 5 6
7 8 9
1
Multiplication matrix is:
30 36 42
66 81 96
102 126 150
```

## 10. Print a Star Program.

### Code:

```
#include<stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    for(int i=1;i<=n;i++)
    {
        for(int j=1;j<=i;j++){
            printf("* ");
        }
        printf("\n");
    }
}
```



## Output:

```
5
*
* *
* * *
* * * *
* * * * *
```

## 11. Enter the username and domain in While loop the code Behaviour depends on the user interactions.

### Code:

```
#include<stdio.h>
#include<stdbool.h>
int main(){
    while(true)
    {
        start:
        printf("Enter the username\n");
        char ch[20];
        scanf("%s",ch);
        printf("Enter the Domain\n");
        char ch1[20];
        scanf("%s",ch1);
        printf("Do you want to continue\n");
        printf("Press 1 for Continue\n");
        printf("Press 2 for Exit\n");
        int a;
        scanf("%d",&a);
        if(a==2)
            break;
        else if(a==1)
            goto start;
        return 0;
    }
}
```

### Output:

```
Enter the username
Gowtham9615
Enter the Domain
ECE
Do you want to continue
Press 1 for Continue
Press 2 for Exit
2
rps@rps-virtual-machine:~/Assignments/Tasks-13May$
```

**12. Satisfy the do while condition by asking username and domain and exit of the program depends on the user.**

### Code:

```
#include<stdio.h>
int main(){
    do{
        start:
        printf("Enter the username\n");
        char ch[20];
        scanf("%s",ch);
        printf("Enter the Domain\n");
        char ch1[20];
        scanf("%s",ch1);
        printf("Do you want to continue\n");
        printf("Press 1 for Continue\n");
        printf("Press 2 for Exit\n");
        int a;
        scanf("%d",&a);
        if(a==2)
            break;
        else if(a==1)
            goto start;
    }
    while(1);
}
```

### Output:

```
rps@rps-virtual-machine:~/Assignments/Tasks-13May$ gcc dowhile.c
rps@rps-virtual-machine:~/Assignments/Tasks-13May$ ./a.out
Enter the username
Madhu
Enter the Domain
CSE
Do you want to continue
Press 1 for Continue
Press 2 for Exit
2
rps@rps-virtual-machine:~/Assignments/Tasks-13May$ 
```