Tutorial 4

Name: Aditi Singh
Batch: C1_1
Roll no. 16010123020

Q1
```c
#include<stdio.h>
int main()
{
    int a[4]={1,2,3,4};
    char c[4]={'a','b','c','d'};
    float f[4]={0.1,0.2,0.3,0.4};
    printf("Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020 \n\n");
    for (int i=0;i<4;i++)
    {
        printf("%d ",a[i]);
    }
    for (int i=0;i<4;i++)
    {
        printf("\na[%d]=%d",i,a[i]);
    }
    printf("\n\n");
    for (int i=0;i<4;i++)
    {
        printf("%c ",c[i]);
    }
    for (int i=0;i<4;i++)
    {
        printf("\nc[%d]=%c",i,c[i]);
    }
    return 0;

    printf("\n\n");
    for (int i=0;i<4;i++)
    {
        printf("%f ",f[i]);
    }
    for (int i=0;i<4;i++)
    {
        printf("\nf[%d]=%f",i,f[i]);
    }
    return 0;
```

```
}
```

Output

```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

1 2 3 4
a[0]=1
a[1]=2
a[2]=3
a[3]=4

a b c d
c[0]=a
c[1]=b
c[2]=c
c[3]=d
```

```
0.100000 0.200000 0.300000 0.400000
f[0]=0.100000
f[1]=0.200000
f[2]=0.300000
f[3]=0.400000
```

Q2
```c
#include<stdio.h>
#include<math.h>
int main()
{
  int n;
    printf("Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020 \n\n");
    printf("Enter the number elements of the array: ");
    scanf("%d",&n);
    int a[n];
    for (int i=0;i<n;i++)
    {
       a[i]=pow(2,i);
    }

    for (int i=0;i<n;i++)
    {
       printf("%d ",a[i]);
```

```c
    }
    return 0;
}
```

Output

```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

Enter the number elements of the array: 5
1 2 4 8 16
```

```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

Enter the number elements of the array: 10
1 2 4 8 16 32 64 128 256 512
```

```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

Enter the number elements of the array: 12
1 2 4 8 16 32 64 128 256 512 1024 2048
```

Q3
```c
#include <stdio.h>
#include<string.h>
int main()
{
  printf("Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020 \n\n");
  char f[50],l[50];
  printf("Enter first name:");
  scanf("%s",f);
  printf("Enter last name:");
  scanf("%s",l);
  printf("%s_%s",f,l);
  return 0;
}
```

Output

```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

Enter first name:hello
Enter last name:world
hello_world
```

```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

Enter first name:Aditi
Enter last name:Singh
Aditi_Singh
```

Q4
```c
#include <stdio.h>
#include <string.h>
int main() {
  printf("Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020 \n\n");
  char s1[50], s2[50],ch='r',s3[50];
  int *p;
  printf("Enter string 1:");
  scanf("%s", s1);
  printf("Enter string 2:");
  scanf("%s", s2);
  printf("Enter string 3:");
  scanf("%s", s3);
  printf("Length of string is: %d\n", strlen(s1));
  strcpy(s3, s2);
  printf("String s1(copied): %s\n", s3);
  strcat(s1, s2);
  printf("String s1(concatenated):%s\n", s1);
  printf("strcmp:%d\n",strcmp(s1,s2));
  printf("First occurence of %c is: %s\n",ch,strchr(s2,ch));
  printf("First occurence of %s is: %s\n",s2,strstr(s1,s2));
  return 0;
}
```

Output
```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

Enter string 1:hello
Enter string 2:world
Enter string 3:hello
Length of string is: 5
String s1(copied): world
String s1(concatenated):helloworld
strcmp:-15
First occurence of r is: rld
First occurence of world is: world
```

```
Name: Aditi Singh, Batch: C1_1, Roll no. 16010123020

Enter string 1:aditi
Enter string 2:singh
Enter string 3:hello
Length of string is: 5
String s1(copied): singh
String s1(concatenated):aditisingh
strcmp:-18
First occurence of r is: (null)
First occurence of singh is: singh
```