Theory Assignment – 04

```c
// 1. Write a program in C to find the maximum number between two numbers using a pointer.

#include <stdio.h>

int main(){
    int *ptr1, *ptr2, *max;
    int n1, n2;

    printf("Enter two numbers : ");
    scanf("%d %d", &n1, &n2);

    ptr1 = &n1;
    ptr2 = &n2;

    max = ptr1;

    if(*ptr2>*max){
        max = ptr2;
    }

    printf("\nMaximum : %d", *max);

    return 0;
}
```

Output

Enter two numbers : 5 6

Maximum : 6

```c
// 2. Write a program in C to print all the alphabets using a pointer.

#include <stdio.h>

int main(){
    char *letter = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";

    int i = 0;

    while (*(letter+i)!='\0')
    {
        printf("%c ", *(letter+i));
        i++;
    }

    return 0;
}
```

Output :

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

```c
// 3. Write a program in C to print the elements of an array in reverse order using pointer.

#include <stdio.h>

int main(){
    int *ptr;

    int array[5]={1,2,3,4,5};

    ptr = array;

    int i = 4;
    printf("In reverse manner\n");
    while (i>=0)
    {
        printf("%d ", *(ptr+i));
        i--;
    }

    return 0;
}
```

Output :

```
In reverse manner
5 4 3 2 1
```

```c
// 4. How to find frequency of a character in a string ?

#include <stdio.h>
#include <string.h>

int main(){

    char value[100];
    char ch;
    int frequency = 0;

    printf("Enter a string : ");
    scanf("%s", &value);

    printf("Enter a character : ");
    scanf(" %c", &ch);

    int i = 0;
    while (value[i]!='\0')
    {
        if(value[i]==ch){
            frequency ++ ;
        }
        i++;
    }

    printf("\n\nFrequency of %c is : %d", ch, frequency);

    return 0;
}
```

Output :

```
Enter a string : university
Enter a character : i

Frequency of i is : 2
```

```c
// 5. How to find vowels and consonants from a given string ?

#include <stdio.h>

int main(){
    char value[100];

    printf("Enter a string : ");
    scanf("%s", &value);

    int vowels = 0;
    int consonant = 0;

    int i = 0;

    while (value[i]!='\0')
    {
        if(value[i]=='a' || value[i]=='e' || value[i]=='i' || value[i]=='o' ||
value[i]=='u' || value[i]=='A' || value[i]=='E' || value[i]=='I' || value[i]=='O' ||
value[i]=='U'){
            vowels += 1;
        }
        else{
            consonant += 1;
        }

        i++;
    }

    printf("Number of vowels : %d\nNumber of consonents : %d", vowels, consonant);
    return 0;
}
```

Output :

Enter a string : University

Number of vowels : 4
Number of consonants : 6