Assignment 20

1-
```
#include <stdio.h>
void swap(int *, int *);
int main()
{
  int a, b;
  printf("Enter two Numbers");
  scanf("%d %d", &a, &b);
  swap(&a, &b);
  printf("a = %d  b = %d", a, b);
  return 0;
}

void swap(int *p, int *q)
{
  int t;
  t = *p;
  *p = *q;
  *q = t;
}
```

3.
```
#include <stdio.h>
void input(int *k, int size);
void display(int *d, int size);
void sort(int *s, int size);

int main()
{
  int a[50]; n;
  printf("Enter Array size\n");
```

```
scanf("%d", &n);
input(a, n);
printf("Entered arry is :\n");
display(a, n);
printf("\n");
sort(a, n);
printf("Sorted array is :\n");
display(a, n);
return 0;
}
void input(int *k, int size)
{
  int i;
printf("Enter %d elements\n", size);
 for(i=0; i<size; i++)
{
    scanf("%d", k+i);
}
}
void display(int *p, int size)
{
  int i;
for(i=0; i<size; i++)
{
   printf("%d", *(p+i));
}
}

void sort(int *p, int size)
{
   int i, j, temp;
```

```
for (i=0; i<size-1; i++)
{
    for (j=i+1; j<size; j++)
    {
        if (*(p+i) > *(p+j))
        {
            temp = *(p+i);
            *(p+i) = *(p+j);
            *(p+j) = temp;
        }
    }
}
```

5-
```
#include<stdio.h>
void max(int *a, int *b);
int main()
{
  int x, y;
  printf("Enter two numbers:\n");
  scanf("%d %d", &x, &y);
  max(&x, &y);
  return 0;
}

void max(int *a, int *b)
{
   if (*a > *b)
   printf("MAX = %d", *a);
  else
    printf("MAX = %d", *b);
}
```

8.
```
#include<stdio.h>
void input(int *p, int size);
void sum (int *p, int size);

int main()
{
   int n;
   int a[20];
   printf("Enter size of array\n");
   scanf("%d", &n);
   input (a, n);
   sum (a, n);
   return 0;
}
void input (int *p, int size)
{
   int i;
   printf("Enter %d elements \n", size);
   for (i=0; i<size; i++)
   {
      scanf("%d", p+i);
   }
}

void sum (int *p, int size)
{
   int sum = 0, i;
  for(i=0; i<size; i++)
{
      sum = sum + *(p+i);
}
```

```
    printf (" Sum is %d ", sum );
}
```

9.
```
#include<stdio.h>
void input (int *p, int size);
void display (int *p, int size);

int main ( )
{
    int a[20], n;
    printf(" Enter Array Size " );
    scanf ("%d" &n );
    input (a, n );
    display (a, n );
    return 0;
}

void input (int *p, int size)
{
    int i;
    printf (" Enter %d elements ", size);
  for (i=0; i<size; i++)
  {
     scanf ("%d", p+i );
  }
}
void display ( int *p, int size)
{
    int i;
  for (i= size-1 ; i>=0 ; i--)
  {
```

```
    printf(" %d ", *(p+i));
}
}
```

6-
```
#include<stdio.h>
void length (char *p);
int main()
{
  char a[10];
  printf("Enter you String \n");
    fgets(a, 10, stdin);
  printf("Your Entered String is : \n");
   printf("%s", a);
   length(a);
  return 0;
}

void length (char *p)
{
  int i;
  printf("Length is : \n");
   for(i=0; *(p+i); i++);
    printf("%d", i-1);
}
```

Qu.2.
```
#include<stdio.h>
int main()
{
  char *a = "Ritik";
  char *b = "Kaushik";
  swap(&a, &b);
```

```
printf("%s %s", a, b);
return 0;
}

void swap (char **x, char ** y)
{
    char *temp;
    temp = *x;
    *x = *y;
    *y = temp;
}
```

4-
```
#include<stdio.h>
int main()
{
    int x=10, *p, **q, ***r;
    p= &x;
    q= &p;
    r = &q;

    printf("%d %d %d %d \n", x, *p, **q, ***r);
    printf("%d %d %d %d \n", &x, p, *q, **r);
    printf("%d %d %d \n", &p, q, r);
    printf("%d %d \n", &q, r);
    printf("%d \n", &r);
}
```

10-
```
#include <stdio.h>
void reverse (char *p, int size);
int main()
{
    char a[10];
```

```
printf("Enter a string\n");
gets(a);
reverse(a, 10);
return 0;
}
void reverse(char *p, int size)
int i, l;
l = strlen(p);
for(i=l-1; i>=0; i--)
  printf("%c", *(p+i));
```

7

```
#include<stdio.h>
void vcount(char *p, int size);
int main()
{
  char a[10];
  printf("Enter a string\n");
  gets(a);
  vcount(a, 10);
  return 0;
}
void vcount(char *p, int size);
{
  int i, vowel=0, conso=0;
  for(i=0; p[i]; i++)
  {
    if(p[i]=='a' || p[i]=='e' || p[i]=='i' || p[i]=='o'
       || p[i]=='u')
      vowel++;
    else
      conso++;
  }
  printf("%d\n", vowel);
  printf("%d", conso);
}
```