Assignment 20
Pointers

①
```
#include <stdio.h>
int swap( int *, int *);
int main()
{
int number1, number2, i;
printf(" Enter 2 numbers\n");
scanf("%d %d", &number1, &number2);
printf("%d  %d\n", number1, number2);
printf(" Number1  %d\n Number2  %d\n", number1, numb
printf(" After swapping the values of Number1 and Numbe
  i= swap( &number1, &number2);
if(i==1)
  printf("\n\n...Successfully swaped the values...");
getch();
return 0;
}
int swap( int *s, int *t)
    {
*s = *s + *t;
*t = *s - *t;
*s = *s - *t;
printf(" Number1 :%d\n Number2 : %d", Number1, numb
        return 4;
}
```

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(2)
```
#include <stdio.h>
int swapStrings(char *, char*);
int main()
{
char str1[200], str2[200]; int i;
printf("Enter 2 strings\n");
fgets(str1, 200, stdin);
fgets(str2, 200, stdin);
printf("%s %s\n", str1, str2);
printf("str1 = %s\n", str1);
printf("str2= %s\n", str2);
printf("After swapping the strings\n");
i = swapStrings(str1, str2);
if(i==1)
printf("\n\n... Successfully swapped the strings...");
getch();
return 0;
}

int swapString(int* p, int *q)
{
int i; char ch; length1, length2, j;
for(i=0; *(q+i); i++)
{
ch = *(p+i);
*(p+i) = *(q+i);
*(q+i) = ch;
}
```

```
for(i=0; *(p+i); i++);
length1 = i;
for(i=0; *(q+i); i++);
length2 = i;
```

```
int swap(char *p, char *q)
    {
    int i, j, length1, length2;
    char ch, char *r;
    for(i=0; *(p+i); i++);
      length1 = i;
    for(i=0; *(q+i); i++);
      length2 = i;
    for(i=0; i<=length1; i++)
      {
        if(length1<=length2)
          {
            ch = *(p+i);
            *(p+i) = *(q+i);
            *(q+i) = ch;
          }
        else
          {
            ch = *(q+i);
            *(q+i) = *(p+i);
            *(p+i) = ch;
          }
      }
    for(j=i; j<=(length1>length2? length1 : length2); j++)
      {
        if(length1>length2)
          r = p;
        else
          r = q;
        *(r+j) = 0;
      }
    if(length1>=length2)
      {
        *(q+j) = *(p+j);
      }
    else
      *(p+j) = *(q+j);
    }
```

printf("str1 = %s \n", str1);
printf("str2 = %s \n", str2);

return;

}

(8) Void sort (int *ptr, int size)
{
int i, j, count, temp;

for(j=1; j<size; j++)
{
count = 0;
for(i=0; i<=size-1-j; i++)
{
if(*(ptr+i) >= *(ptr+(i+1)))
{
temp = *(ptr+i);
*(ptr+i) = *(ptr+(i+1));
*(ptr+(i+1)) = temp;
count = 1;
}
}
if(count == 0)
break;
}
}

⑤
```
int findMax(int *p, int *q)
{
if(*p >= *q)
    return(*p);
else return(*q);
}
```

⑥
```
int findlength(char *s)
{
int i;
for(i=0; *(s+i); i++);
  return i;
}
```

⑦
```
void count(char *s)
{
int i, count1=0, count2=0, j; temp;
char p[10] = {'A','a','E','e','I','i','O','o','U','u'};
char q;

for(i=0; *(s+i); i++)
{
  q = *(s+i);          → temp = 0;
for(j=0; j<10; j++)
{
if(q == p[j])
{
  count1++;
  temp=1;
  break;
```

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}

if (temp == 0)
    count2++;

}

printf("Sum of consonants is %d\n", count2);
printf("Sum of vowels is %d\n", count1);

}

(8) int sum(int* ptr, int size)
{

int sum = 0, i;
for(i = 0; i < size; i++)
    sum = sum + *(ptr + i)

return sum;

}

(9) void printReverse(int *p, int size)
{

int i;
for(i = size-1; i >= 0; i--)
    printf("%d ", *(p+i));

}

(10)

```
void printReverse (char *s);
  {
int i,j;
for(i=0; *(s+i); i++);
  j = i-1;
for (  ; j>=0; j--)
 printf("%c", *(s+j));

}
```