Q1. Write a function to swap values of two in variables of calling function. (TSRN)

#include <stdio.h>

#include <conio.h>

void swap(int \*x, int \*y);

int main()

{

int a, b;

printf("Enter a & b = ");

scanf("%d %d", &a, &b);

swap(&a,&b);

printf("a = %d & b = %d",a,b);

}

void swap(int \*x, int \*y)

{

int tmp;

tmp = \*x;

\*x = \*y;

\*y = tmp;

}

Q2. Write a function to swap strings of two char arrays of calling functions. (TSRN)

#include <stdio.h>

#include <conio.h>

#include <string.h>

void swap(char \*, char \*);

int main()

{

char a[20], b[20];

printf("Enter string a = ");

fgets(a, 20, stdin);

printf("Enter string b = ");

fgets(b, 20, stdin);

swap(a,b);

printf("a = %s",a);

printf("b = %s",b);

}

void swap(char \*s1, char \*s2)

{

char tmp[20];

strcpy(tmp,s1);

strcpy(s1,s2);

strcpy(s2,tmp);

}

Q3. Write a function to sort an array of int type values. [ void sort(int \*ptr,int size); ]

#include <stdio.h>

#include <conio.h>

#include <string.h>

void sort(int \*, int);

int main()

{

int a[10] = {8,2,4,6,9,3,0,7,1,5};//{0,8,4,6,9,3,2,7,1,5}

sort(a,10);

for(int i=0; i<10;i++)

{

printf("%d ",a[i]);

}

}

void sort(int \*ptr, int size)

{

for(int i = 0; i < size; i++)

{

for(int j = i+1; j < size; j++)

{

if(ptr[i] > ptr[j])

{

int tmp = ptr[i];

ptr[i] = ptr[j];

ptr[j] = tmp;

}

}

}

}

Q4. Write a program in C to demonstrate how to handle the pointers in the program.

#include <stdio.h>

#include <conio.h>

int main()

{

printf("We Create Int Type of Array\n\n");

int a[10] = {8,2,4,6,9,3,0,7,1,5};

printf("Accessing Array Element\n");

for(int i = 0; i < 10; i++)

{

printf("%d ",a[i]);

}

printf("\n----------------------------\n\n");

printf("We Create Int Type of Pointer -> int \*ptr\n\n");

int \*ptr;

printf("\n----------------------------\n\n");

printf("Store Address of Array to the Pointer -> ptr = a\n\n");

ptr = a;

printf("\n----------------------------\n\n");

printf("Accessing Array Element Using Pointer\n\n");

for(int i = 0; i < 10; i++)

{

printf("%d ",\*(ptr+i));

}

}

Q5. Write a program to find the maximum number between two numbers using a pointer

#include <stdio.h>

#include <conio.h>

int main()

{

int num1, num2;

printf("Enter Number for num1 & num2 = ");

scanf("%d%d", &num1, &num2);

int \*p1 = &num1, \*p2 = &num2;

if(\*p1 > \*p2)

printf("%d is greater", \*p1);

else if(\*p1< \*p2)

printf("%d is greater", \*p2);

else

printf("Both %d and %d are same", \*p1, \*p2);

}

Q6. Write a program to calculate the length of the string using a pointer

#include <stdio.h>

#include <conio.h>

int main()

{

char str[20];

char \*ptr = str;

int i=0;

printf("Enter String >>> ");

fgets(str, 20, stdin);

for(; ptr[i]; i++);

printf("\nLength of string >>> %d\n", i-1);

}

Q7. Write a program to count the number of vowels and consonants in a string using a pointer.

#include <stdio.h>

#include <conio.h>

int main()

{

char str[20];

char \*ptr = str;

int i = 0, vowel = 0, space = 0;

printf("Enter String = ");

fgets(str, 20, stdin);

for(; ptr[i]; i++)

{

if(ptr[i] == ' ')

{

space++;

}

else if((ptr[i] == 'a') || (ptr[i] == 'A') || (ptr[i] == 'e') || (ptr[i] == 'E') || (ptr[i] == 'i') || (ptr[i] == 'I') || (ptr[i] == 'o') || (ptr[i] == 'O') || (ptr[i] == 'u') || (ptr[i] == 'U'))

{

vowel++;

}

}

printf("\nvowels = %d & consonants = %d\n", vowel, (i - space - 1)-vowel);

}

Q8. Write a program to compute the sum of all elements in an array using pointers.

#include <stdio.h>

#include <conio.h>

int main()

{

int arr[10] = {1,2,3,4,5,6,7,8,9,10};

int \*ptr = arr;

int sum = 0;

for(int i = 0; i < 10; i++)

{

sum = \*(ptr+i) + sum;

}

printf("Sum = %d", sum);

}

Q9. Write a program to print the elements of an array in reverse order.

#include <stdio.h>

#include <conio.h>

int main()

{

int arr[10] = {1,2,3,4,5,6,7,8,9,10};

int \*ptr = arr;

for(int i = 9; i >= 0; i--)

{

printf("%d ", \*(ptr+i));

}

}

Q10. Write a program to print a string in reverse using a pointer

#include <stdio.h>

#include <conio.h>

int main()

{

char arr[13] = "Hello World";

char \*ptr = arr;

for(int i = 10; i >= 0; i--)

{

printf("%c", \*(ptr+i));

}

}