1. Input a number and display summation of all factors of that number. Calculating summation of factors should be done in a function.

Sample Input: 10

Sample Output: 18

Possible function looks like:

Int FactorSum(int p){

-----

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}

#include<stdio.h>

int FactorSum(int x)

{

int i,t;

t=0;

for(i=1; i<=x; i++)

{

if(x%i==0)

{

t=t+i;

}

}

return t;

}

int main()

{

int x,a;

printf ("Enter the number:\n");

scanf("%d",&x);

a = FactorSum(x);

printf("Summation of the factors: %d",a);

return 0;

}

2. Input two numbers and display how many common factors are available in those two numbers. Calculating the number of common factors should be done in a function.

Sample Input: 10 15

Sample Output: 2

Possible function looks like:

Int CommonFactor(int p, int q){

-----

-----

}

#include<stdio.h>

int CommonFactor(int x, int y)

{

int i,t;

t=0;

for(i=1; i<=x; i++)

{

if(x%i==0 && y%i==0)

{

t++;

}

}

return t;

}

int main()

{

int x,y,a;

printf ("Enter the 1st number:\n");

scanf("%d",&x);

printf ("Enter the 2nd number:\n");

scanf("%d",&y);

a = CommonFactor(x,y);

printf("The number of common factors: %d",a);

return 0;

}

3. Input some numbers and display the maximum number of that array. Calculating the maximum should be done in a function.

Sample Input: 5

12 15 11 22 14

Sample Output: 22

Possible function looks like:

Int FindMax(int \*p, int n){

-----

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}

#include<stdio.h>

int FindMax(int \*x, int y)

{

int i,t;

t=0;

for(i=1; i<=y; i++)

{

if(x[i]>t)

{

t=x[i];

}

}

return t;

}

int main()

{

int x[1000],n,a,i;

printf ("Enter the total number:\n");

scanf("%d",&n);

printf ("Enter the numbers one by one:\n");

for(i=0;i<n;i++)

{

scanf("%d",&x[i]);

}

a = FindMax(x,n);

printf("The maximum number of them: %d",a);

return 0;

}

4. Input a word and display the ratio between vowels and consonants of that word using a

function.

Sample Input: Apple

Sample Output: 0.666667

Possible function looks like:

flloat Ratio(char \*p){

-----

-----

}

#include<stdio.h>

#include<string.h>

float Ratio(char \*x)

{

char q;

int i,t,r;

float p;

q=strlen(x);

t=0;

r=0;

for(i=0; i<q ;i++)

{

if(x[i]=='A' || x[i]=='E' || x[i]=='I' || x[i]=='O' || x[i]=='U' ||

x[i]=='a' || x[i]=='e' || x[i]=='i' || x[i]=='o' ||x[i]=='u' )

{

t++;

}

else

{

r++;

}

}

p = t/(float)r;

return p ;

}

int main()

{

char x[1000];

float a;

printf ("Enter the word:\n");

scanf("%s",x);

a = Ratio(x);

printf("The ratio between vowels and consonants: %.2f",a);

return 0;

}

5. Input a word and display number of uppercase letters in that word using a function.

Sample Input: Apple

Sample Output: 1

Possible function looks like:

Int CountUpper(char \*p){

-----

-----

}

#include<stdio.h>

#include<string.h>

float CountUpper(char \*x)

{

char q;

int i,t;

t=0;

q=strlen(x);

for(i=0; i<q ;i++)

{

if(x[i]>='A' && x[i]<='Z')

{

t++;

}

}

return t ;

}

int main()

{

char x[1000];

int i,a;

printf ("Enter the word:\n");

scanf("%s",x);

a = CountUpper(x);

printf("The number of uppercase letters: %d",a);

return 0;

}

6. Input a sentence and display the length of each word (May use a function. Or without function is also ok)

Sample Input: Baby is sleeping

Sample Output: 4 2 8

Without function:

#include<stdio.h>

#include<string.h>

int main()

{

char x[100];

int i,c,n,m;

printf("Enter the Sentence:\n");

gets(x);

n=strlen(x);

c=0;

m=0;

printf("The length of each word:\n");

for(i=0; i<n; i++)

{

if(x[i]!=' ')

{

c++;

}

if(x[i]==' ' || i==(n-1))

{

printf("%d\n",c);

c=0;

}

}

return 0;

}

7. Input a sentence and display the length of the highest word (May use a function. Or without function is also ok)

Sample Input: Baby is sleeping

Sample Output: 8

#include<stdio.h>

#include<string.h>

int main()

{

char x[100];

int i,c,n,m;

printf("Enter the Sentence:\n");

gets(x);

n=strlen(x);

c=0;

m=0;

printf("The length of each word:\n");

for(i=0; i<n; i++)

{

if(x[i]!=' ')

{

c++;

}

if(x[i]==' ' || i==(n-1))

{

printf("%d\n",c);

if(c>m)

{

m=c;

}

c=0;

}

}

printf("the length of the highest word: %d\n",m);

return 0;

}

8. Input a sentence and display the longest word (May use a function. Or without function is also ok)

Sample Input: Baby is sleeping

Sample Output: sleeping

#include <stdio.h>

#include <string.h>

int main()

{

char x[100];

char longest\_x[100];

int n,i,a,b,index;

printf("Enter the sentence:\n");

gets(x);

n = strlen(x);

a = 0;

b = 0;

index = 0;

for (i=0; i<=n; i=i+1)

{

if (x[i] != ' ' && x[i] != '\0')

{

b=b+1;

continue;

}

if (b > a)

{

a = b;

index = i - a;

}

b = 0;

}

for (i = 0; i < a; i=i+1)

{

longest\_x[i] = x[index+i];

}

longest\_x[i] = '\0';

printf ("Longest word: %s\n", longest\_x);

printf ("Longest word length: %d\n", a);

return 0;

}