**Lab 1**

1. *Write a program to round off an integer “i” to the next largest multiple of another integer “j”. For example, 256 days when rounded off to the next largest multiple divisible by a week results into 259.*

#include<stdio.h>

int main()

{

int i,j;

scanf("%d%d",&i,&j);

int x=i/j;

x++;

printf("\n%d",j\*x);

getch();

return 0;

}

1. *A number is entered through the keyboard. The number may contain 1,2,3,4, or 5 digits. Write a program to find the number of digits in the number.*

#include<stdio.h>

int main()

{

int i,j,x;

scanf("%d",&x);

for(i=1;x!=0;i++)

x=x/10;

printf("\n%d",--i);

getch();

return 0;

}

**3.**  *Write a program which finds a four digit number AABB which is a perfect square. A and B represent different digits.*

*#include<stdio.h>*

*#include<math.h>*

*int main()*

*{*

*int i,j,x,a,b;*

*i=1100;*

*while(i<9999)*

*{*

*a=i/1000;*

*b=i%10;*

*for(j=1;j<10;j++)*

*{*

*x=sqrt(i);*

*if(x\*x==i&&a!=b)*

*printf("%d\n",i);*

*i=i+11;*

*}*

*i=i+1001;*

*}*

*getch();*

*return 0;*

*}*

*4. Write a program of Factorial through recursion.*

#include<stdio.h>

int f=1;

int fact(int i)

{

if(i==1||i==0)

return f;

else

{

f=f\*i;

i--;

fact(i);

}

}

int main()

{

int x;

scanf("%d",&x);

printf("%d\n",fact(x));

getch();

}

*5 .Write a program which takes a string as input from user and returns the length of that string*

#include<stdio.h>

int main()

{

int i;

char x[20];

gets(x);

for(i=0;x[i]!='\0';i++)

{}

printf("\n%d",--i);

getch();

return 0;

}

*6. Write a pointer version of the function strcat (s,t) copies the string t to the end of s.*

*7. Write the function strend(s,t), which returns 1 if the string t occurs at the end of the string s, and zero otherwise.*

#include<stdio.h>

#include<string.h>

int strend(char \*p,char \*q)

{

int c1,c2,i,z=0,c=0,x;

for(i=0;p[i]!='\0';i++)

{}

c1=i;

//printf("%d\n",c1);

for(i=0;q[i]!='\0';i++)

{}

c2=i;

// printf("%d\n",c2);

x=c1-c2;

for(i=x;i<c1;i++,z++)

if(p[i]==q[z])

c++;

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

if(c==c2)

return 1;

else

return 0;

}

void \*strcat1(char \*s,char \*t)

{

int c1,c2,i,z=0;

for(i=0;s[i]!='\0';i++)

{}

c1=i;

for(i=0;t[i]!='\0';i++)

{}

c2=--i;

for(i=c1;i<=c2+c1;i++,z++)

s[i]=t[z];

s[i]='\0';

puts(s);

}

int main()

{

int i;

char s[40],t[20];

gets(s);

gets(t);

strcat1(s,t);

printf("\n%d",strend(s,t));

getch();return 0;}