#include<stdio.h>

#include<math.h>

float fun(float x )

{

return pow(2.7182818284 , -x)-sin(x);

}

float diff\_fun(float x )

{

return -pow(2.7182818284 , -x)-cos(x);

}

int main ()

{

float a = 0 , b =0 , c = 0;

for(int i = 0 ;i<=5;i++ )

{

if(fun(a)\*fun(b) < 0)

break;

if(fun(i)<0)

b = i;

if(fun(i)>0)

a = i;

}

a = (a+b)/2;

b = a;

printf("At start Xo : %f\n\n", a);

int i = 1;

do{

c = b ;

b = a;

a = b - (float)fun(b)/diff\_fun(b);

printf("x%d : %f\n",i++ , a);

if(a - b == 0 && b - c == 0)

break;

}while( 1);

printf("\nRoot is : %f\n", a);

return 0;

}