```c
#include<stdio.h>
#include<math.h>
float f(float x);
float f1(float x);
int main()
{
float x,b,h,error=1e-7;
int r;
printf("Enter the initial value\n");
scanf("%f",&x);
if (fabs(f1(x))<0.00001)
{
printf("Change the initial value\n");
}
else
{
h=-f(x)/f1(x);
while(fabs(h)>error)
{
x=x+h;
h=-f(x)/f1(x);
}
printf("Root =%7.5f(correct upto 5D)",x);
}
return(0);
}
float f(float x)
{
float b,y;
int r;
r=3;
b=1.+(r/20.);
y=pow(x,2)*tan(x)-exp(b*sin(x))-3;
return(y);
}
float f1(float x)
{
float b,y;
int r;
r=3;
b=1.+(r/20.);
y=pow(x,2)*(1-pow(tan(x),2))+2*x*tanh(x)-b*cos(x)*exp(b*cos(x));
return(y);
}
//*Output*//
Enter the initial value
1.5
Root =1.57080(correct upto 5D)
```