CECS 524 Unit 5 Assignments

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Rewrite the Pascal Quadratic (from Unit 2) program in C

Code:

```
#include <stdio.h>
#include <math.h>
#include <stdlib.h>

int main() {

   while(1)
   {
      double a ,b,c,rl,im;
      printf("Enter a b c values: ");
      scanf("%lf %lf %lf", &a, &b, &c);
      if(a==0&&b==0&&c==0)
      {
         printf("3 equations were solved\n");
         exit(0);
      }
       if(b*b-4*a*c>0)
       {
          printf("Roots are real\n");
```

```
    printf("Root 1: %lf\n",(-b+sqrt((b*b)-4*a*c))/(2*a));
    printf("Root 2: %lf\n",(-b-sqrt((b*b)-4*a*c))/(2*a));

}

else if(b*b-4*a*c==0)
{
     printf("One real root\n");
     printf("Root 1:%lf\n",(-b)/(2*a));
}


else if(b*b-4*a*c<0)
{
   printf("Roots are Imaginary\n");
   rl=-b/(2*a);
   im= sqrt(-((b*b)-4*a*c))/2*a;
   if(b==0)
   {
       printf("Root 1:+i*%lf\n",im);
       printf("Root 2:-i*%lf\n",im);
   }
   else
   {
       printf("Root 1:%lf+i*%lf\n",rl,im);
       printf("Root 2:%lf-i*%lf\n",rl,im);
   }
```

```
        }
    }
    return 0;

}
```

Output: