newtonRaphson.c

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

#define f(x) exp(-x) - 3*x
#define df(x) -exp(-x) - 3

int main() {
    float x0, x1, f0, df0, e, error;
    int i = 0;

    printf("f(x) = e^-x - 3x\nf'(x) = -e^-x - 3\n");
    printf("Enter initial guess: ");
    scanf("%f", &x0);
    printf("Enter error precision: ");
    scanf("%f", &error);

    printf("\nSteps \t x0 \t f(x) \t f'(x) \t x1 \t Error\n");
    do {
        f0 = f(x0);
        df0 = df(x0);
        x1 = x0 - (f0 / df0);
        e = fabs((x1 - x0) / x1);
        i++;
        printf("%d \t %.6f \t %.6f \t %.6f \t %.6f \t %.6f\n", i, x0, f0, df0, x1, e);
        x0 = x1;
    } while (e > error);

    printf("\nRoot is: %.6f\n", x1);
    return 0;
}

```