|  |
| --- |
| #include <stdio.h> |
|  |  |
|  | float fun(float x, float y) { |
|  | double f; |
|  | f = (x - y) / (x + y); |
|  | return f; |
|  | } |
|  |  |
|  | int main() { |
|  |  |
|  | double x0, y0, x, y, h, xn, k; |
|  |  |
|  | printf("y' = f(x,y) = (x-y)/(x+y) given.\n"); |
|  |  |
|  | printf("Enter initial value for x (x\_0): "); |
|  | scanf("%lf", &x0); |
|  | printf("Enter initial value for y (y\_0): "); |
|  | scanf("%lf", &y0); |
|  | printf("Enter the spacing value for x (h): "); |
|  | scanf("%lf", &h); |
|  | printf("Enter the value of x at which y is required: (x\_n): "); |
|  | scanf("%lf", &xn); |
|  |  |
|  | x = x0; |
|  | y = y0; |
|  |  |
|  | printf("x\t\ty\n"); |
|  | printf("%lf\t%lf\n", x, y); |
|  |  |
|  | while (x < xn) { |
|  | k = h \* fun(x, y); |
|  | y = y + k; |
|  | x = x + h; |
|  | printf("%lf\t%lf\n", x, y); |
|  | } |
|  |  |
|  | printf("f(%lf) = %lf", xn, y); |
|  |  |
|  | return 0; |
|  | } |