**Practical No: 069**

**Aim: -Implementation of Golden Section Search**

**Step 1: Define a function**

function f(x)

return x^2

end

**Step 2: Implement Golden Section Search Function**

function golden\_section\_search(f, a, b, n)

p = 1.618 - 1

d = p \* b + (1 - p) \* a

yd = f(d)

for i = 1:n-1

print(a, "\n")

print(b, "\n")

c = p \* a + (1 - p) \* b

yc = f(c)

if yc < yd

b, d, yd = d, c, yc

else

a, b = b, c

end

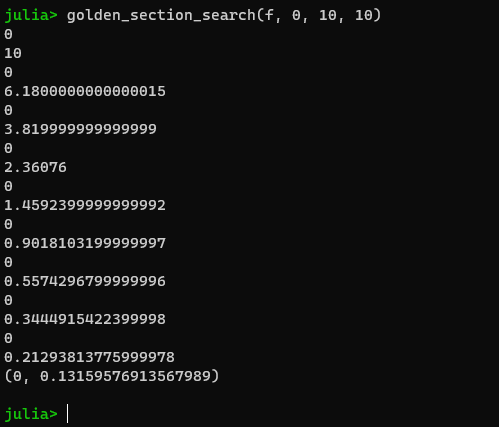
end

return a < b ? (a, b) : (b, a)

end

**Step 3: Call Golden Section Search with the defined function and an interval (a, b) and number of iterations**

In our case a = 0 and b = 10 and number of iterations n = 10

****