**Birge Vietta Method:**

def f(x):

return X\*\*4+X\*\*3+5\*X\*\*2+4\*X+1

p0=float(input("Enter Value of Initial Aprrox.root p0="))

a0=float(input("Enter value of a0="))

a1=float(input("Enter value of a1="))

a2=float(input("Enter value of a2="))

a3=float(input("Enter value of a3="))

a4=float(input("Enter value of a4="))

i=int(input("Enter No. of Iterations="))

count=1

while(count<=i):

b0=a0

b1=a1+p0\*b0

b2=a2+p0\*b1

b3=a3+p0\*b2

b4=a4+p0\*b3

c0=b0

c1=b1+p0\*c0

c2=b2+p0\*c1

c3=b3+p0\*c2

p1=p0-(b4/c3)

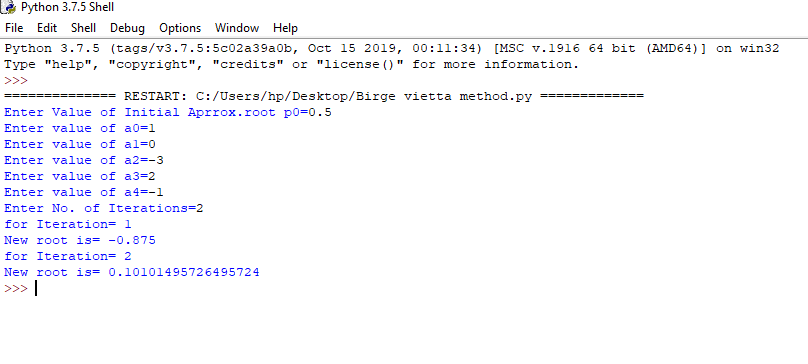
print("for Iteration=",count)

print("New root is=",p1)

p0=p1

count=count+1

**OUTPUT:**

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