**Quiz 1**

1. Write a Ruby Program to compute that takes input number from a user and prints All Fibonacci Numbers Upto that number. Your program should validate if the user provided input is a number or not.

First n Fibonacci numbers first using loop.

Second, write the same program using Recursion.

Ans:

#!/usr/bin/env ruby

puts "enter a num"

a =0

while a<2

a = gets.to\_i

end

fibs = [1,1]

for x in 2 .. a

fibs << fibs [x-1]+fibs[x-2]

end

print fibs

puts

recursion:

def fibonacci(n)

if n< 2

return n

else

(fibonacci(n-1) + fibonacci(n-2))

end

end

puts fibonacci(6)

2. Write a Ruby program to find a number is prime or not

Ans: by using “irb” we can know a number is prime or not ? like this

5.prime?## it shows true.

Program:

#!/usr/bin/env ruby  
  
class PrimeGen  
attr\_reader :primes  
  
def initialize  
@primes = [2, 3]  
end  
  
def generate\_next  
def check\_prime(n)  
limit = Math.sqrt(n).ceil  
@primes.each {|p| break false if n % p == 0; break true unless p < limit }  
end  
  
n = @primes[-1] + 2  
n += 2 until check\_prime(n)  
@primes << n  
return n  
end  
end  
  
print "Enter a number: "  
num = gets.to\_i  
  
p = PrimeGen.new  
p.generate\_next until p.primes[-1] >= num  
  
if num == 2 or p.primes[-1] == num then puts "#{num} is prime" else puts "#{num} is composite"

end

3. Write a Ruby program using Recursion to print the Factorial of a number

Ans:

#factorial of a number

#!/usr/bin/env ruby  
 puts “please enter a number ”

n=gets.to\_i

fact = 0

for i in 1 .. n

fact \*=i

end

puts “the factorial of a given number is :”, fact

gets

4. Write a Ruby program that Prints all permutations of a string using loops

for example, if input to program is xyz, the program prints x, xy,xyz,y,yz,xyz etc

ans: def perm(l,n,str\_a)

if len(str\_a)== n

puts str\_a

elsif #need to call recursively perm

for c in l #size of each char

perm(l,n,str\_a+c)#add current char to str\_a

perm (['x','y','z'], 2, " ")

end

5. Ruby program to reverse a string

Ans:in “interactive ruby “ we can directly reverse string like

“anil”.reverse

Program: a1 = “anil”

a2 = a1.reverse

a1.reverse!

6. Ruby program that takes a image url (http://www.bacteriainphotos.com/photo%20gallery/mrsa%20picture.jpg ) and prints it's height and width.

Hint: use fast image

<https://github.com/sdsykes/fastimage>

7. Write a program to print the top store in reddit.

HINT: reddit.com/.json

8. Write a Ruby program to sort an array.

9. Write a Ruby program to convert all the elements of an array to a single string

10. Write a Ruby program that iterates through every element of an array and returns a new array HINT: .map()