**Quiz 1**

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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) def fibonacci(n)

sequence = []

(0..n).each do |n|

if n &lt; 2

sequence &lt;&lt; n

else

sequence &lt;&lt; sequence[-1] + sequence[-2]

end

end

sequence.last

end

Using recursion:

def fibonacci(n)

if n &lt; 2

n

else

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

end

end

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

Ans) class DetermineIfPrime

def initialize (nth\_value)

@nth\_value = nth\_value

primetest

end

def primetest

if Prime.prime?(@nth\_value)

puts ("#{@nth\_value} is prime")

else

puts ("This is not a prime number.")

end

rescue Exception

puts ("#{$!.class}")

puts ("#{$!}")

end

end

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

Ans)

def factorial(n)

if n == 0

1

else

n \* factorial(n-1)

end

end

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

5. Ruby rogram to reverse a string

Ans)

def reverse\_whole\_string(string)

raise StandardError.new if string.nil? || string.empty?

end\_loop = string.length

new\_string = ''

while end\_loop &gt;= 0

end\_loop -= 1 new\_string += string[end\_loop]

end

new\_string

end

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.

Ans)

def sortedlist(array, reverse = false)

if

reverse == false

array.sort{|x,y| x <=> y}

else

array.sort{|x,y| y <=> x}

end

end

num\_order = [6,3,7,2,8]

puts "In list order : #{sortedlist(num\_order)}"

puts "In reverse sort : #{sortedlist(num\_order, true)}"

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()