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.
puts "Enter a number to get Fibonacci Sequence"
number = gets.to_i
def fib(num)
          puts "Fibonacci Sequence are:"
  i, j = 0, 1
  while i <= num
    yield i
    i, j = j, i + j
  end
end

fib(number) {|i| puts i}
```

Second, write the same program using Recursion.

```
puts "Enter a number to get Fibonacci Sequence"
number = gets.to_i
def fibo(n)
 return n if n <= 1
 return fibo(n-1) + fibo(n-2)
end
puts "Fibonacci is:"
puts fibo(number)
```

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

```
puts "prime number check"
puts "enter number for check: "
  n = gets
  n = n.to_i

def prime(n)
  puts "That's not an integer." unless n.is_a? Integer
  is_prime = true
  for i in 2..n-1
    if n % i == 0
      is_prime = false
    end
```

```
  end
  if is_prime
    puts "#{n} is prime!"
  else
    puts "#{n} is not prime."
  end
end

prime(n)
```

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

```
puts "Enter a number to get Factorial"
number = gets.to_i
def fact(n)
  if n == 0
    1
  else
    n * fact(n-1)
  end
end
puts "Factorial is:"
puts fact(number)
```

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

```
def alt_reverse(string)
  word = ""
  chars = string.each_char.to_a
  chars.size.times{word << chars.pop}
  word
end
puts alt_reverse("skoruz")
```

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

```
require 'fastimage'

FastImage.size("http://www.bacteriainphotos.com/photo%20gallery/mrsa%20picture.jpg")
```

7. Write a program to print the top store in reddit.
HINT: reddit.com/.json

8. Write a Ruby program to sort an array.

```
def bubble_sort(array)
  n = array.length
  loop do
    swapped = false

    (n-1).times do |i|
      if array[i] > array[i+1]
        array[i], array[i+1] = array[i+1], array[i]
        swapped = true
      end
    end

    break if not swapped
  end

  array
end
arry = [8,6,8,3,2,4,5]
puts bubble_sort(arry)
```

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

```
strings = ["one", "two", "THREE"]
def toString(str)
puts str.length
str.each do |st|
    puts st
end
end
puts toString(strings)
```

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

```
nouns = ['truffle', 'kiss', 'rabbit']
array_of_chocolates = nouns.map do |noun|
  "chocolate #{noun}"
end
puts array_of_chocolates
```