

SWE 2034 RUBY LAB ASSESSMENT 1

21MIS1021

VIMAL KUMAR S

1.Introduction

a.variables and methods

```
irb(main):017:0> IRB
=> IRB
irb(main):018:0> val=26
=> 26
irb(main):019:0> val.kind_of?Integer
=> true
irb(main):020:0> val.class
=> Integer
irb(main):021:0> val.size
=> 4
irb(main):022:0> val.round
=> 26
irb(main):023:0> val.next
=> 27
irb(main):024:0>
```

b.conversion of variables

```
Start Command Prompt with  X + v
C:\Users\Dell\Desktop\21MIS1021 VIMAL KUMAR S>irb
irb(main):001:0> val2=30
=> 30
irb(main):002:0> val2.to_int
=> 30
irb(main):003:0> val2.to_f
=> 30.0
irb(main):004:0> val2.to_s(16)
=> "1e"
irb(main):005:0> val3=40
=> 40
irb(main):006:0> val3.to_r
=> (40/1)
irb(main):007:0> val3.to_c
=> (40+0i)
irb(main):008:0> val3.to_s
=> "40"
irb(main):009:0>
```


e. A program with a break

```
File Edit View

i=1
while true
  puts i* 10
  i += 1
  if i * 3 >= 21
    break
  end
end
```

```
C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>ruby assessment1.rb
10
20
30
40
50
60

C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>
```

2. A program that prints out the first 10 even numbers

```
puts "First ten even numbers are are:"
2.step 20, 2 do |x|
  put "#{x}"
end
```

```
C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>ruby assessment1.rb
first even numbers are:
2
4
6
8
10
12
14
16
18
20
```

3. A program that calculates the factorial of a number using a while loop

```
assessment1.rb
File Edit View

puts "Enter the number : "
num=gets.chomp.to_i
fact=1
if(num==0)
  puts "No factorial"
else
  i=1
  while(i<=num)
    fact=fact*i
    i+=1
  end
  puts"Factorial of #{num} is #{fact}"
```

```
C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>ruby assessment1.rb
Enter the number :
5
Factorial of 5 is 120
```

4. A program that prints out the sum of all numbers from 1 to 100 using a for loop

```
File Edit View

sum=0
for i in 1..100 do
  sum+=i
end
puts"the sum of the numbers from 1 to 100 is:#{sum}"
```

```
C:\Users\Dell\Desktop\21MIS1021 VIMAL KUMAR S>ruby emp.rb
the sum of the numbers from 1 to 100 is:5050
```

5.A program that prints out the multiplication table of a number

```
assessment1.rb X +
File Edit View

puts "Enter number:"
num=gets.chomp.to_i
for i in 1..20
  mult=num*i
  puts "#{num} * #{i} = #{mult}"
end
```

```
C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>ruby assessment1.rb
Enter number:
10
10 * 1 = 10
10 * 2 = 20
10 * 3 = 30
10 * 4 = 40
10 * 5 = 50
10 * 6 = 60
10 * 7 = 70
10 * 8 = 80
10 * 9 = 90
10 * 10 = 100
10 * 11 = 110
10 * 12 = 120
10 * 13 = 130
10 * 14 = 140
10 * 15 = 150
10 * 16 = 160
10 * 17 = 170
10 * 18 = 180
10 * 19 = 190
10 * 20 = 200
C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>
```

6.A program that checks if a number is prime or not

```
assessment1.rb X +
File Edit View

puts "Enter the number:"
num=gets.chomp.to_i
count=0
if (num==0)
  puts "0 is not prime"
else
  i=2
  while(i<num)
    if (num%i==0)
      count+=1
    end
    i+=1
  end
  if count>1
    puts "#{num} no primr number"
  else
    puts "#{num} is a prime number"
  end
end
```

```
C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>ruby assessment1.rb
Enter the number:
19
19 is a prime number
C:\Users\student.PROGRAMMING404\Desktop\21MIS1021>
```

7.A program that prints out the Fibonacci sequence up to a certain number

```
first=0
second=1
nextterm=0
puts"enter the number of terms"
n=gets.chomp.to_i
puts"the first #{n} terms of fibanocci series are "
c=1
while(c<=n+1)
  if(c<=1)
    nextterm=c
  else
    puts nextterm
    nextterm=first+second
    first=second
    second=nextterm
  end
  c+=1
end
```

OUTPUT:

```
C:\Users\Dell\Desktop\21MIS1021 VIMAL KUMAR S>ruby emp.rb
enter the number of terms
12
the first 12 terms of fibanocci series are
1
1
2
3
5
8
13
21
34
55
89
144
```

8.A program that prints out a triangle of stars

```
print "Enter Number for Rows", ": "

rows = gets.chomp.to_i

for row in 0..rows
  (rows-row).times {print " "}
  row.times {print "*"}
  puts
end
```

```
C:\Users\Dell\Desktop\21MIS1021 VIMAL KUMAR S>ruby emp.rb
Enter Number for Rows: 14
```

```
      *
     **
    ***
   ****
  *****
 *****
*****
*****
*****
*****
*****
*****
*****
*****
*****
*****
```

9.A program that reverses a string using a while loop

File Edit View

```
puts "Enter a string to reverse: "
string = gets.chomp

reversed_string = ""
i = string.length - 1

while i >= 0 do
  reversed_string += string[i]
  i -= 1
end

puts "The reversed string is: #{reversed_string}"
```

```
C:\Users\Dell\Desktop\21MIS1021 VIMAL KUMAR S>ruby emp.rb
Enter a string to reverse:
1160
The reversed string is: 0611
```

10. A program that prints out the common elements between two arrays

```
arr1 = ["VIMAL","KUMAR","PRIYANKA","VIT"];
arr2 = ["VIMAL","PRIYANKA"];

arr3 = arr1 & arr2;

print "Common array elements:\n#{arr3}";
```

```
C:\Users\Dell\Desktop\21MIS1021 VIMAL KUMAR S>ruby emp.rb
Common array elements:
["VIMAL", "PRIYANKA"]
C:\Users\Dell\Desktop\21MIS1021 VIMAL KUMAR S>
```