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**Lab-7**

**Ruby Programming**

**Create a student class with the details : Register number , name, cat1 marks(50), cat2 marks(50), DA1marks(10), DA2marks(10),DA3 Marks(10). Write appropriate function to perform the following:**

**1. Create N objects and Initialize using constructor**

**2. Write display function to display all objects details.**

**3. Write a function to calculate the total internal marks for 60 : cat1 and cat2 have 15% weightage of each and All DA for 30 marks . Total 60 )**

**4. Write a overloading function for the following operation:**

**a. Calculate the class average of Cat1 and Cat2 separately ( use + operator and / operator)**

**b. Calculate and display the student regno , name and mark who got the max mark in Cat1 and Cat2 separately. ( use > opearator)**

**c. Find the person all mark details who is first in the list in the alphabetical order of their names.**

**Code:**

class Student

attr\_accessor:reg\_no,:name,:cat1,:cat2,:da1,:da2,:da3

def initialize(reg\_no,name,cat1,cat2,da1,da2,da3)

@reg\_no=reg\_no

@name=name

@cat1=cat1

@cat2=cat2

@da1=da1

@da2=da2

@da3=da3

end

def display(i)

print("The reg no of student #{i} is:#{reg\_no}\n")

print("The name of student #{i} is: #{name}\n")

print("The CAT 1 mark of the student #{i} is: #{cat1}\n")

print("The CAT 2 mark of the student #{i} is: #{cat2}\n")

print("The DA 1 mark of the student #{i} is: #{da1}\n")

print("The DA 2 mark of the student #{i} is: #{da2}\n")

print("The DA 3 mark of the student #{i} is: #{da3}\n")

end

def internal()

internal\_marks=(cat1\*0.15)+(cat2\*0.15)+da1+da2+da3

end

def +(obj)

cat1+obj.cat1

end

def /(obj)

cat2+obj.cat2

end

def <(obj)

cat1<obj.cat1

end

def >(obj)

cat2<obj.cat2

end

end

print("Enter the number of students:\n")

n=gets.to\_i

student=Array.new()

for i in 0...n

print("Enter the details of student#{i}:\n")

print("Reg No:\n")

reg\_no=gets.to\_i

print("Name:\n")

name=gets.to\_s

print("CAT 1 Marks:\n")

cat1=gets.to\_i

print("CAT 2 Marks:\n")

cat2=gets.to\_i

print("DA 1 Marks:\n")

da1=gets.to\_i

print("DA 2 Marks:\n")

da2=gets.to\_i

print("DA 3 Marks:\n")

da3=gets.to\_i

student.push(Student.new(reg\_no,name,cat1,cat2,da1,da2,da3))

end

print("All Student Details:\n")

for i in 0...n

student[i].display(i)

end

sum\_cat1=0

sum\_cat2=0

for i in 0...n

sum\_cat1=sum\_cat1+student[i].cat1

sum\_cat2=sum\_cat2+student[i].cat2

end

avg\_cat1=sum\_cat1.to\_f/student.size

avg\_cat2=sum\_cat2.to\_f/student.size

print("Average of CAT 1 is:#{avg\_cat1}\n")

print("Average of CAT 2 is:#{avg\_cat2}\n")

temp\_cat1=0

temp\_cat2=0

for i in 0...student.size

if temp\_cat1<student[i].cat1

temp\_cat1=student[i].cat1

end

if temp\_cat2>student[i].cat2

temp\_cat2=student[i].cat2

end

end

print("Person with Highest CAT 1 Mark is:\n")

for i in 0...student.size

if temp\_cat1==student[i].cat1

print("Reg No: #{student[i].reg\_no},Name: #{student[i].name},CAT 1 Marks:#{student[i].cat1}\n")

end

end

print("Person with Highest CAT 2 Mark is:\n")

for i in 0...student.size

if temp\_cat2==student[i].cat2

print("Reg No: #{student[i].reg\_no},Name:#{student[i].name},CAT 2 Marks:#{student[i].cat2}\n")

end

end

**Output:**





