Lab 4

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**Resubmitted after some corrections

Function myCGPA that calculate students' CGPA

```
myGPA <- function(marks, creditHrs){
  gp <- 0
  for(i in 1:length(marks)){
    if(marks[i] >=80){
      gp <- gp + (4*creditHrs[i])
    }
    else if(marks[i] >=75){
      gp <- gp + (3.7*creditHrs[i])
    }
    else if(marks[i] >= 70){
      gp <- gp + (3.3*creditHrs[i])
    }
    else if(marks[i] >= 65){
      gp <- gp + (3*creditHrs[i])
    }
    else if(marks[i] >= 60){
      gp <- gp + (2.7*creditHrs[i])
    }
    else if(marks[i] >= 55){
      gp <- gp + (2.3*creditHrs[i])
    }
    else if(marks[i] >= 50){
      gp <- gp + (2*creditHrs[i])
    }
    else if(marks[i] >= 45){
      gp <- gp + (1.7*creditHrs[i])
    }
    else if(marks[i] >= 40){
      gp <- gp + (1.3*creditHrs[i])
    }
    else if(marks[i] >= 35){
      gp <- gp + (1*creditHrs[i])
    }
    else{
      gp <- gp + 0
    }
```

```
  }
  GPA <- gp / sum(creditHrs)
  return(GPA)
}

myCGPA <- function(GPA, creditHrs){
  total <- 0
  for (i in range(2)) {
    total <- total + (sum(creditHrs[i])*GPA[i])
  }
  CGPA <- total/sum(creditHrs)
  return(CGPA)
}

creditHrs1 <- c(4, 2, 3, 2, 1)
marks1 <- c(90, 80, 75, 99, 85)
GPA1 <- myGPA(marks1, creditHrs1)

creditHrs2 <- c(4, 2, 3, 2, 2)
marks2 <- c(80, 80, 65, 99, 65)
GPA2 <- myGPA(marks2, creditHrs2)

combineGPA <- c(GPA1, GPA2)
paste("combineGPA vector will contains : ",
      format(round(combineGPA[1], 2),
                   nsmall = 2),
      format(round(combineGPA[2], 2),
                   nsmall = 2))
```

```
## [1] "combineGPA vector will contains :  3.93 3.62"
```

```
combineHrs <- c(sum(creditHrs1), sum(creditHrs2))
paste("combineHrs vector will contains : ",
      combineHrs[1], combineHrs[2])
```

```
## [1] "combineHrs vector will contains :  12 13"
```

```
paste("CGPA : ",
      sprintf(myCGPA(combineGPA, combineHrs),
              fmt = "%.2f"))
```

```
## [1] "CGPA :  3.76"
```