# This program calculates the GPA for a student.

# Define variables.

n=1

totalPoints=0

totalUnits=0

# Obtain a number of courses that the student has taken.

numCourse=int(input("Enter number of courses: "))

# If a user inputs zero or negative numbers,

# print an error message and ask the user for the valid input.

while numCourse<=0:

print("Invalid Entry, number of courses must be positive number")

numCourse=int(input("Enter number of courses: "))

# Obtain the letter grade and the number of credits for each course.

while n<=numCourse:

print("For course number %s" %n)

letterGrade=input("Enter letter grade(A,B,C,D, or F): ").upper()

# When valid letter grade and number of credit are entered,

# calculate and/or update subTotal, totalPoints and totalUnits

# until the data for all courses are obtained.

if letterGrade=="A":

numCredit=float(input("Enter number of credits: "))

while numCredit<1 or numCredit>3:

print("Invalid Entry, a course can have between 1 and 3 credits.")

numCredit=float(input("Enter number of credits: "))

subTotal=numCredit\*4

totalPoints=totalPoints+subTotal

totalUnits=totalUnits+numCredit

n=n+1

elif letterGrade=="B":

numCredit=float(input("Enter number of credits: "))

while numCredit<1 or numCredit>3:

print("Invalid Entry, a course can have between 1 and 3 credits.")

numCredit=float(input("Enter number of credits: "))

subTotal=numCredit\*3

totalPoints=totalPoints+subTotal

totalUnits=totalUnits+numCredit

n=n+1

elif letterGrade=="C":

numCredit=float(input("Enter number of credits: "))

while numCredit<1 or numCredit>3:

print("Invalid Entry, a course can have between 1 and 3 credits.")

numCredit=float(input("Enter number of credits: "))

subTotal=numCredit\*2

totalPoints=totalPoints+subTotal

totalUnits=totalUnits+numCredit

n=n+1

elif letterGrade=="D":

numCredit=float(input("Enter number of credits: "))

while numCredit<1 or numCredit>3:

print("Invalid Entry, a course can have between 1 and 3 credits.")

numCredit=float(input("Enter number of credits: "))

subTotal=numCredit\*1

totalPoints=totalPoints+subTotal

totalUnits=totalUnits+numCredit

n=n+1

elif letterGrade=="F":

numCredit=float(input("Enter number of credits: "))

while numCredit<1 or numCredit>3:

print("Invalid Entry, a course can have between 1 and 3 credits.")

numCredit=float(input("Enter number of credits: "))

totalUnits=totalUnits+numCredit

n=n+1

# If the user inputs invalid entry,

# print an error message and ask for the valid input.

else :

print("Invalid Entry")

# Compute and print GPA.

GPA=totalPoints/totalUnits

print("Your GPA is: %.2f" %GPA)

