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February 8, 2025

Activity No. and Title:

Course: CPE 103	Program: BSCpE
Course Title: Object Oriented Programming	**Date Performed:** 02/01/2025
Section: BSCPE 1-A	**Date Submitted:** 02/01/2025
Student Name: MANONGSONG, KEN R.	**Instructor's Name:** ENGR. MARIA RIZETTE SAYO

Objective/s of the activity:

1. To create a program that calculates a student's preliminary grades.

Intended Learning Outcome:

1. At the end of this exercise the students understand and perform/execute the intended program correctly.
2. After this exercise student's can apply these knowledge for the future activity/exercises.

Discussion:

1. This program is fundamental for the students who are learning about programming it enables them to acquire knowledge in calculation based programs. This cumputation of grades involves using the basic operations and expression in python such as using some classes and calculations related to this topic. The program will also guide the students to make themselves a better learner about the OOP in Python this will equip them a sense of professionalism in the field that they're taking and will prepare them as they step up in programming

Task

1. A teacher wants to calculate the final grade in a CpE course and want to write it in a python program. The following are the requirements:
2. PRELIM GRADE = 50% Prelim Exam + 50% Prelim Class Standing (CS)
3. PRELIM CS = 50% Hands-on activity + 30% Quiz + 20% Assignment
4. MIDTERM GRADE = 1/3 of PRELIM GRADE + 2/3 of (50% Midterm Exam + 50% Midterm Class Standing (CS))
5. MIDTERM CS = 50% Hands-on activity + 30% Quiz + 20% Assignment
6. FINAL GRADE = 1/3 of MIDTERM GRADE + 2/3 of (50% Final Exam + 50% Final Class Standing (CS))

7. FINAL CS = 50% Hands-on activity + 30% Quiz + 20% Assignment
8. HOAs, Quizzes and Assignments are inputted as average of all submissions and are out of 100%.
9. Major exams are inputted out of 100%.
10. Show the codes that successfully run the program.
11. Provide comments or documentation strings for your program.

Materials and Equipment:

1. Desktop Computer
2. Google Collab

[ ]:
```
# Place all the output of the procedures here
```

Procedure:

1. Prompts the user to enter the his/her first and last name

   print("Enter your first name") FNAME = str(input()) print("Enter your last name") LNAME = str(input()) print()

2. The system will then prompt the user to enter the preliminary grade for recitation, quiz and assignments.

```
Enter your grades for preiminary
Enter your prelim recitation grade (100/100): 67
Enter your prelim quiz grade (100/100): 78
Enter your prelim assignment grade (100/100): 99
```

3. It will then calculate the input values and will display the Preliminary Class Standing (PCS).

```
Your prelim CS is:  76.7
```

4. After that it will prompt the user to input the preliminary exam grade and will display the calculated preliminary grade.

```
Enter your prelim exam grade: 96
Preliminary grade is:  86.35
```

5. Next, the process repeats as the user proceeds to prompt the midterm and final grades.

```
Enter your grades for midterm
Enter your midterm recitation grade (100/100): 85
Enter your midterm quiz grade (100/100): 65
Enter your midterm assignment grade (100/100): 68
Your midterm CS is:  75.6
Enter your prelim exam grade: 65
Midterm grade is:  70.30

Enter your grades for final
Enter your final recitation grade (100/100): 98
Enter your final quiz grade (100/100): 65
Enter your final assignment grade (100/100): 65
Your final CS is:  81.5
```

```
Enter your prelim exam grade: 45
Final grade is:  63.25
```

6. Next, it will perform the conditional statement and will convert the grades into the University of Caloocan City grading system, and will display a corresponding set of numbers based from the University of Caloocan City grading system

```
def number_system(grade):
   if 99 <= grade <= 100:
     return 1.00
   elif 96 <= grade <= 98:
     return 1.25
   elif 93 <= grade <= 95:
     return 1.50
   elif 90 <= grade <= 92:
     return 1.75
   elif 87 <= grade <= 89:
     return 2.00
   elif 84 <= grade <= 86:
     return 2.25
   elif 81 <= grade <= 83:
     return 2.50
   elif 78 <= grade <= 80:
     return 2.75
   elif 75 <= grade <= 77:
     return 3.00
   else:
     return 5.00
 print("Your final average: ", "%.2f" % number_system(FG))
```

7. After the system calculates the first student's grades, it will then repeat the whole process for the second and third user because of this code "for i in range(3):"

```
for i in range(3):
```

[ ]:
```
# Place all the output of the supplementary activity here
```

Supplementary Activity:

1. Test 3 students from the program you created.
2. The program should show the name of the student, the PRELIM, MIDTERM and FINAL grades.
3. Convert the final grade into the UCCs numerical grade. Please refer to the grading system.
4. Document your lab activity properly using Markdown codes.
5. Answer all the supplementary activities (programs and questions).
6. Write your conclusion.
7. Convert your notebook into a PDF file and submit the PDF to the link.

[ ]:
```
# Questions
```

Questions: (write your answers in blue font color and questions in black)

1. How did you overcome the programming obstacle?

   ANSWER: I've tried different options on how to construct the line of codes by applyingwhat i have learned from the last sessions and activities that I've made.

2. What is the purpose of the "number_system" function in the code?

   ANSWER: By looking at the final grade I applied the "IF, ELSE STATEMENTS" for example, if I get a final grade of 98, the system will then execute the condition statement which is "if(99 <= grade <= 100):" it will return/print a value of (1.0)

Conclusion: In conclusion, this program is all about calculating your grades step-by-step for your preliminary, midterm, and final exams. First you input your recitation, quiz, and assignment scores, along with your exam results, it then calculates your overall grade for each term. The final grade is then used to show you a GPA score based on a number system used by the University of Caloocan City.

After inputting all your grades, you'll get a summary of your performance for each part of the course, and then the program will give you your final average in the form of a grade point. It's a helpful tool for you to know what's you're performance throughout the semester and even predict your final grade.

[69]:
```
for i in range(3):

  class grades:
   def Prelim_Grade(self, PCS, PEXAM):
    Prelim_Grade = PEXAM*.5 + PCS*.5
    return Prelim_Grade

  def Prelim_CS(self, PCS, PQUIZ, PASSIGNMENT):
    Prelim_CS = PCS*.5 + PQUIZ*.3 + PASSIGNMENT*.2
    return Prelim_CS

  def Midterm_Grade(self, MCS, MEXAM):
    Midterm_Grade = MEXAM*.5 + PCS*.5
    return Midterm_Grade

  def Final_Grade(self, FCS, FEXAM):
    Final_Grade = FEXAM*.5 + FCS*.5
    return Final_Grade

  def Final_CS(self, FCS, FQUIZ, FASSIGNMENT):
    Final_CS = FCS*.5 + FQUIZ*.3 + FASSIGNMENT*.2
    return Final_CS

  print("Enter your first name")
  FNAME = str(input())
  print("Enter your last name")
  LNAME = str(input())
  print()
```

```
print("Enter your grades for preiminary")
PRECITATION = float(input("Enter your prelim recitation grade (100/100): "))
PQUIZ = float(input("Enter your prelim quiz grade (100/100): "))
PASSIGNMENT = float(input("Enter your prelim assignment grade (100/100): "))
PCS = PRECITATION*.5 + PQUIZ*.3 + PASSIGNMENT*.2
print("Your prelim CS is: ", PCS)
PEXAM = float(input("Enter your prelim exam grade: "))
PG = PEXAM*.5 + PCS*.5
print("Preliminary grade is: ", "%.2f" % PG)
print()

print("Enter your grades for midterm")
MRECITATION = float(input("Enter your midterm recitation grade (100/100): "))
MQUIZ = float(input("Enter your midterm quiz grade (100/100): "))
MASSIGNMENT = float(input("Enter your midterm assignment grade (100/100): "))
MCS = MRECITATION*.5 + MQUIZ*.3 + MASSIGNMENT*.2
print("Your midterm CS is: ", MCS)
MEXAM = float(input("Enter your prelim exam grade: "))
MG = MEXAM*.5 + MCS*.5
print("Midterm grade is: ", "%.2f" % MG)
print()

print("Enter your grades for final")
FRECITATION = float(input("Enter your final recitation grade (100/100): "))
FQUIZ = float(input("Enter your final quiz grade (100/100): "))
FASSIGNMENT = float(input("Enter your final assignment grade (100/100): "))
FCS = FRECITATION*.5 + FQUIZ*.3 + FASSIGNMENT*.2
print("Your final CS is: ", FCS)
FEXAM = float(input("Enter your prelim exam grade: "))
FG = FEXAM*.5 + FCS*.5
print("Final grade is: ", "%.2f" % FG)
print()

print(FNAME, LNAME)
print("Preliminary grade is: ", "%.2f" % PG)
print("Midterm grade is: ", "%.2f" % MG)
print("Final grade is: ", "%.2f" % FG)
print()

def number_system(grade):
  if 99 <= grade <= 100:
    return 1.00
  elif 96 <= grade <= 98:
    return 1.25
  elif 93 <= grade <= 95:
    return 1.50
```

```
    elif 90 <= grade <= 92:
      return 1.75
    elif 87 <= grade <= 89:
      return 2.00
    elif 84 <= grade <= 86:
      return 2.25
    elif 81 <= grade <= 83:
      return 2.50
    elif 78 <= grade <= 80:
      return 2.75
    elif 75 <= grade <= 77:
      return 3.00
    else:
      return 5.00
  print("Your final average: ", "%.2f" % number_system(FG))
```

```
Enter your first name
ken
Enter your last name
manongsong

Enter your grades for preiminary
Enter your prelim recitation grade (100/100): 67
Enter your prelim quiz grade (100/100): 78
Enter your prelim assignment grade (100/100): 99
Your prelim CS is:  76.7
Enter your prelim exam grade: 96
Preliminary grade is:  86.35

Enter your grades for midterm
Enter your midterm recitation grade (100/100): 85
Enter your midterm quiz grade (100/100): 65
Enter your midterm assignment grade (100/100): 68
Your midterm CS is:  75.6
Enter your prelim exam grade: 65
Midterm grade is:  70.30

Enter your grades for final
Enter your final recitation grade (100/100): 98
Enter your final quiz grade (100/100): 65
Enter your final assignment grade (100/100): 65
Your final CS is:  81.5
Enter your prelim exam grade: 45
Final grade is:  63.25

ken manongsong
Preliminary grade is:  86.35
```

```
Midterm grade is:  70.30
Final grade is:  63.25

Your final average:  5.00
Enter your first name
rosmar
Enter your last name
Santos

Enter your grades for preiminary
Enter your prelim recitation grade (100/100): 56
Enter your prelim quiz grade (100/100): 34
Enter your prelim assignment grade (100/100): 67
Your prelim CS is:  51.6
Enter your prelim exam grade: 89
Preliminary grade is:  70.30

Enter your grades for midterm
Enter your midterm recitation grade (100/100): 98
Enter your midterm quiz grade (100/100): 99
Enter your midterm assignment grade (100/100): 97
Your midterm CS is:  98.10000000000001
Enter your prelim exam grade: 98
Midterm grade is:  98.05

Enter your grades for final
Enter your final recitation grade (100/100): 98
Enter your final quiz grade (100/100): 95
Enter your final assignment grade (100/100): 96
Your final CS is:  96.7
Enter your prelim exam grade: 97
Final grade is:  96.85

rosmar Santos
Preliminary grade is:  70.30
Midterm grade is:  98.05
Final grade is:  96.85

Your final average:  1.25
Enter your first name
jonard
Enter your last name
herbal

Enter your grades for preiminary
Enter your prelim recitation grade (100/100): 56
Enter your prelim quiz grade (100/100): 54
Enter your prelim assignment grade (100/100): 34
```

```
Your prelim CS is:  51.0
Enter your prelim exam grade: 65
Preliminary grade is:  58.00

Enter your grades for midterm
Enter your midterm recitation grade (100/100): 45
Enter your midterm quiz grade (100/100): 56
Enter your midterm assignment grade (100/100): 45
Your midterm CS is:  48.3
Enter your prelim exam grade: 89
Midterm grade is:  68.65

Enter your grades for final
Enter your final recitation grade (100/100): 98
Enter your final quiz grade (100/100): 97
Enter your final assignment grade (100/100): 93
Your final CS is:  96.69999999999999
Enter your prelim exam grade: 67
Final grade is:  81.85

jonard herbal
Preliminary grade is:  58.00
Midterm grade is:  68.65
Final grade is:  81.85

Your final average:  2.50
```