Dunman High School  
Y5 H2 Computing

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# Python Programming Practical 2

**1 (Checking whether a number is even)  
Write a program that reads an integer and checks whether it is even.**

CODE:

# Filename: yeesh\_p02\_q01.py

# Author: Yee Shen Hao

# Description: Write a program that reads an integer and checks whether it is even.

# User input for integer

integer = int(input("Enter an integer: "))

# Check if integer is odd or even, prints results.

if integer %2 == 0:

print(integer, "is even")

else :

print(integer, "is odd")

end = input("Press ENTER to exit")

OUTPUT:

Enter an integer: 3

3 is odd

Press ENTER to exit

>>> ================================ RESTART ================================

>>>

Enter an integer: 128

128 is even

Press ENTER to exit

**2 (Validating triangles and computing perimeter)**

**Write a program that reads three edges for a triangle and determines whether the input is**

**valid. The input is valid if the sum of any two edges is greater than the third edge. The**

**program will compute the perimeter of the triangle if the input is valid. Otherwise, display**

**that the input is invalid.**

CODE:

#Filename: yeesh\_p02\_q02.py

#Author: Yee Shen Hao

#Description:

##Write a program that reads three edges for a triangle and determines whether the input is

##valid. The input is valid if the sum of any two edges is greater than the third edge. The

##program will compute the perimeter of the triangle if the input is valid. Otherwise, display

##that the input is invalid. 2 sample sessions are as follows:

# User input:

print("This is to calculate perimeter of a triangle (in metres.)")

side1 = float(input("Enter side 1: "))

side2 = float(input("Enter side 2: "))

side3 = float(input("Enter side 3: "))

perimeter = side1+side2+side3

# Check if triangle is valid, print results

if side1+side2>side3 and side3+side2>side1 and side1+side3>side2:

print("Perimeter = ", str(perimeter), " m.")

else:

print("Invalid triangle.")

end = input("Press ENTER to exit")

OUTPUT:

This is to calculate perimeter of a triangle (in metres.)

Enter side 1: 2

Enter side 2: 3

Enter side 3: 4

Perimeter = 9.0 m.

Press ENTER to exit

**3 (Determining grade)**

**Write a program that prompts the user to enter a score between 0 and 100 inclusive.**

CODE:

## Filename: yeesh\_p02\_q03.py

## Name: Yee Shen Hao

## Description: Write a program that prompts the user to enter a score between 0 and 100 inclusive. The

##grading system is as follows: is valid or not.

# prompt for input

score = float(input("Enter score (%): "))

if score > 69 and score < 101:

print("Your grade is A.")

elif score > 59 and score < 70:

print("Your grade is B.")

elif score > 54 and score < 60:

print("Your grade is C.")

elif score > 49 and score < 55:

print("Your grade is D.")

elif score > 44 and score < 50:

print("Your grade is E.")

elif score > 34 and score < 45:

print("Your grade is S.")

elif score >= 0 and score < 35:

print("Your grade is U.")

else:

print("Invalid Score")

end = input("Press ENTER to exit")

OUTPUT:

Enter score (%): 80

Your grade is A.

Press ENTER to exit

**4 (Determining leap year)**

**Write a program that prompts the user to enter a year and determines whether it is a leap**

**year. A year is a leap year if it is divisible by 4 but not 100, or is divisible by 400**

CODE:

##Filename: yeesh\_p02\_q04.py

##Name: Yee Shen Hao

##Description: Write a program that prompts the user to enter a year and determines whether it is a leap

##year. A year is a leap year if it is divisible by 4 but not 100, or is divisible by 400.

# Prompt user to input the year

year = int(input("Enter year (AD):"))

# Check if input is leap year:

if year > 0 and ((year%4 == 0 and year%100 != 0) or year%400 == 0) :

print(year, "is leap year.")

elif year <= 0 :

print("Please enter a valid year (AD).")

else:

print(year, "is not leap year.")

end = input("Press ENTER to exit")

OUTPUT:

Enter year (AD):2008

2008 is leap year.

Press ENTER to exit

>>> ================================ RESTART ================================

>>>

Enter year (AD):-3

Please enter a valid year (AD).

Press ENTER to exit

>>> ================================ RESTART ================================

>>>

Enter year (AD):0

Please enter a valid year (AD).

Press ENTER to exit

>>> ================================ RESTART ================================

>>>

Enter year (AD):2003

2003 is not leap year.

Press ENTER to exit

## 5 (Finding the number of days in a month)

Write a program that prompts the user to enter the month and year, and displays the

number of days in the month.

CODE:

##Filename: yeesh\_p02\_q05.py

##Name: Yee Shen Hao

##Description: Write a program that prompts the user to enter the month and year, and displays the

##number of days in the month.

import calendar

# User input

month = int(input("Enter a month (in digits):"))

year = int(input("Enter a year:"))

month\_range =str(calendar.monthrange(year,month))

month\_10 = month\_range[-3]

month\_1 = month\_range[-2]

#output

print("Number of days in", calendar.month\_name[month], year, "is", month\_10 + month\_1)

end = input("Press ENTER to exit")

OUTPUT:

Enter a month (in digits):2

Enter a year:1994

Number of days in February 1994 is 28

Press ENTER to exit

>>> ================================ RESTART ================================

>>>

Enter a month (in digits):2

Enter a year:2008

Number of days in February 2008 is 29

Press ENTER to exit

**6 (Sorting three integers)**

**Write a program that sorts three integers. The integers are entered from standard input and**

**stored in variables num1, num2, and num3, respectively. The program sorts the numbers**

**so that num1 > num2 > num3. The result is displayed as a sorted list in descending order**

CODE:

## Filename: yeesh\_p02\_q06.py

## Name: Yee Shen Hao

## Description: Write a program that sorts three integers. The integers are entered from standard input and

##stored in variables num1, num2, and num3, respectively. The program sorts the numbers

##so that num1 > num2 > num3. The result is displayed as a sorted list in descending order

# User input

num1 = int(input("Enter 1st integer:"))

num2 = int(input("Enter 2nd integer:"))

num3 = int(input("Enter 3rd integer:"))

#Create list

sort = [num1,num2,num3]

#Print

print("In descending order:", sorted(sort, reverse=True))

end = input("Press ENTER to exit")

OUTPUT:

Enter 1st integer:3

Enter 2nd integer:5

Enter 3rd integer:6

In descending order: [6, 5, 3]

Press ENTER to exit