D.A.V International School Amritsar

Information Practices Practical File

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Class:- 11-A

Stream:- Non - Medical

Softcopy :- https://github.com/sethipriyanshu/schoolpython

Project - Greatest Number Finder

Code :-

```
  num1 = int(input(("Enter First Number Here")))
num2 = int(input(("Enter Second Number Here")))
num3 = int(input(("Enter Third Number Here")))

if num1 > num2 and num1 > num3:
    out = "Number 1 is the greatest among three numbers11"
elif num2 > num1 and num2 > num3:
    out = "Number 2 is the greatest among three numbers"
elif num3 > num1 and num3 > num2:
    out = "Number 3 is the greatest among three numbers"
else:
    out = "Invalid inputs , Try Again"

print(out)
```

Output:-

```
 Enter First Number Here 50

 Enter Second Number Here 60

 Enter Third Number Here 80

 Number 3 is the greatest among three numbers
```

Project - Leap Year Checker

Code :-

```
 leap = int(input("Enter the year here"))
if leap % 4 == 0:
   if (leap % 100) == 0:
       if (leap % 400) == 0:
           print(" It is a leap year")
       else:
           print("It is not a leap year")
   else:
       print("It is a leap year")
else:
   print("It is not a leap year")
```

Output:-

```
 Enter the year here 2004

It is a leap year
```

Project - Temperature Unit Converter

Code :-

```
  inp = float(input("Enter temperature in celsius "))
out = str((inp * 9/5) + 32)
print(out + "" + " Fahrenheit")

inp = float(input("Enter temperature in fahrenheit "))
out = str((inp - 32) * 5/9)
print(out + "" + " Celsius")
```

Output:-

```
 Enter temperature in celsius 105

221.0 Fahrenheit

Enter temperature in fahrenheit 50

10.0 Celsius
```

Project - Odd Even Number Checker

Code :-

```
 inp = int(input(("Enter The Number Here")))
if inp % 2 == 0:
    out = "This is an even number"
else:
    out = "This is an odd number"
print(out)
```

Output:-

Enter The Number Here 78695

This is an odd number

Project - Triangle Type Checker

Code :-

```
side1 = float(input("Enter First Side here "))
side2 = float(input("Enter Second Side here "))
side3 = float(input("Enter Third Side here "))
if side1 == side2 == side3:
    out = "It is an equilateral Triangle"
    print(out)
elif side1 == side2 or side2 == side3 or side3 == side1:
    out = "It is an isosceles Triangle"
    print(out)
else:
    out = "It is a Scalene Triangle"
    print(out)
```

Output:-

Enter First Side here 6

Enter Second Side here 9
Enter Third Side here 5
It is a Scalene Triangle

Project - Vowel / Consonant Checker

Code :-

```
import sys

inp = input("Enter Your Letter Here ")
len_check = len(inp)
if len_check == 1:
  ltr = inp
else:
    sys.exit("Please Enter a Valid Letter")
if inp == "a" or inp == "e" or inp == "i" or inp == "o" or inp == "u":
        print("It is a vowel")
else:
        print("It is a consonant")
```

Output:-

Enter Your Letter Here f
It is a consonant

Enter Your Letter Here e
It is a vowel

Project - Triangle Possibilty Checker

Code :-

```
  ang1 = float(input("Enter First Angle in degrees "))
ang2 = float(input("Enter Second Angle in degrees "))
ang3 = float(input("Enter Third Angle in degrees"))
ang_add = ang1 + ang2 + ang3
if ang_add == 180:
    print("Yes! This Triangle is possible")
else:
    print("No! This Triangle is not possible")
```

Output:-

```
Enter First Angle in degrees 60

Enter Second Angle in degrees 98

Enter Third Angle in degrees90

No! This Triangle is not possible
```

Project - Grade and Percentage Calculator

Code :-

```
import sys

mark_1 = float(input("Enter Subject 1 Marks Here"))
```

```
mark_2 = float(input("Enter Subject 2 Marks Here"))
mark_3 = float(input("Enter Subject 3 Marks Here"))
mark_4 = float(input("Enter Subject 4 Marks Here"))
mark_5 = float(input("Enter Subject 5 Marks Here"))
mark_sum = mark_1 + mark_2 + mark_3 + mark_4 + mark_5
mark_perc = (mark_sum / 500) * 100
if mark_sum > 500:
   sys.exit("Please Enter Valid Marks")
elif mark_sum >= 80:
   print("Your Grade is A and your percentage is " + str(mark_perc) +
"%")
elif mark_sum >= 60 and mark_sum < 80:
    print("Your Grade is B and your percentage is " + str(mark_perc) +
"%")
elif mark_sum >= 50 and mark_sum < 60:
    print("Your Grade is C and your percentage is " + str(mark_perc) +
"%")
elif mark_sum >= 45 and mark_sum < 50:
    print("Your Grade is D and your percentage is " + str(mark_perc) +
"%")
elif mark_sum >= 25 and mark_sum < 45:
    print("Your Grade is E and your percentage is " + str(mark_perc) +
"%")
else:
    print("Your Grade is F and your percentage is " + str(mark_perc) +
"%")
```

Output:-

Enter Subject 1 Marks Here 50

Enter Subject 2 Marks Here 90

Enter Subject 3 Marks Here 60

Enter Subject 4 Marks Here 80

Enter Subject 5 Marks Here 99

Your Grade is A and your percentage is 75.8%

Project - Random Password Generator

Code :-

```
import random
import array

MAX_LEN = 12
DIGITS = ['0', '1', '2', '3', '4', '5', '6', '7', '8', '9']
LOCASE_CHARACTERS = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h',
                     'i', 'j', 'k', 'm', 'n', 'o', 'p', 'q',
                     'r', 's', 't', 'u', 'v', 'w', 'x', 'y',
                     'z']

UPCASE_CHARACTERS = ['A', 'B', 'C', 'D', 'E', 'F', 'G', 'H',
                     'I', 'J', 'K', 'M', 'N', 'O', 'p', 'Q',
                     'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y',
```

```
                'Z']

SYMBOLS = ['@', '#', '$', '%', '=', ':', '?', '.', '/', '|', '~', '>',
           '*', '(', ')', '<']

COMBINED_LIST = DIGITS + UPCASE_CHARACTERS +
LOCASE_CHARACTERS + SYMBOLS

rand_digit = random.choice(DIGITS)
rand_upper = random.choice(UPCASE_CHARACTERS)
rand_lower = random.choice(LOCASE_CHARACTERS)
rand_symbol = random.choice(SYMBOLS)

temp_pass = rand_digit + rand_upper + rand_lower + rand_symbol

for x in range(MAX_LEN - 4):
    temp_pass = temp_pass + random.choice(COMBINED_LIST)

    temp_pass_list = array.array('u', temp_pass)
    random.shuffle(temp_pass_list)

password = ""
for x in temp_pass_list:
        password = password + x

print(password)
```

Output:-

@5@6bHC(6pYs

Project - Number Guessing Game

Code :-

```
import random

num = random.randint(1, 10)
guess = None

while guess != num:
    guess = input("guess a number between 1 and 10: ")
    guess = int(guess)

    if guess == num:
        print("congratulations! you won!")
        break
    else:
        print("nope, sorry. try again!"
```

Output:-

```
Guess a number between 1 and 10 9
Nope, sorry, try again!
```