Assignment - 3 I write a program to check if the given number is positive or negative I) Start I) input a number num. hum=0, hum=12, hum=-9 II) If check condition: · if num >0 -> print "positive number"

· Else if hum <0 -> print "Negative number"

· Else -> print " Number is zero" Positive number: 1270 → Trye Megative number: - 9>0 -> False -g <0 -> True Number is zero: 0>0 -> False OLO > False N Stop. I write a program to input any aphabet and check whether it is vowel or consonant. 3-start II) input a character from the user.

IT input on alphabet ch. ch = "E" , ch = "k" , ch = "o" m) convert the to lowercose. it ch is in [a, e, i, o, u] - print

"Vowel"

Fise -> print "consanant". vowelle is in [a,e,i,o,u] -> True consonation is in [a, e, i, o, a] -> False vowel-o- is in care, io, uj 7 me vowel -e consonant - K vowel - o I) Stop. 3) write a program to into input angles
of a traignese is valid or not Dstart

- ingle 1. angle of the voir triangle;
- m) check if all three angles are greater than o.
- angles:

 sum = angle 1 + angle 2 + angle 3

 180 = 60 + 60 + 60

 180 = 90 + 45 + 30
- 1) if sum = = 180 and all angles >0
 - e print "Triangle is volid"
 - · Print "Triangle is not valid"

可) Stop.

1) write a program to input all side of a triangle and check whether triangle is valid or not

77 Start

The three side of the triangle: a = 5, b = 7, c = 10 a = 2, b = 3, c = 6

a) apply the triangle inequality Theorem. - A trangle is valid if and only if: - a + b > c - 5+7710 - 12710 - a + c > b - 5+777 - 15>7 - 7 +1075 - 1775 True - Triangle is valid a+b>c - 2+3>6 - 5>6 so. Triangle is NOT valid I) if all the above conditions are true · print "Triangle is valid"

Fise

print "Triangle is not valid" I stop. write a program to check whether the triangle is equilateral, isosceles or scalene triangle. I) Start

triangle: II) The three sides of the a=5 , b=5 , c= 5 a=6 , b=6 , c=8 9=716=8 1 =9

inequality theorem:

· If atb>c and atc7b and b+c7a , then it is a valid triangle.

• Else, print "Not a valid triangle"

5+5+

valid - s+5>5, 5+5>5, 5+5>5

- All side equal - Equilateral triangle

valid - 6+6>8,6+8>6,6+8>6

· Two sides equal (a==b) - Isosceles Triangle

valid - 7+8>9,7+9>8,8+9>7

· No sides equal - scalene Triangle

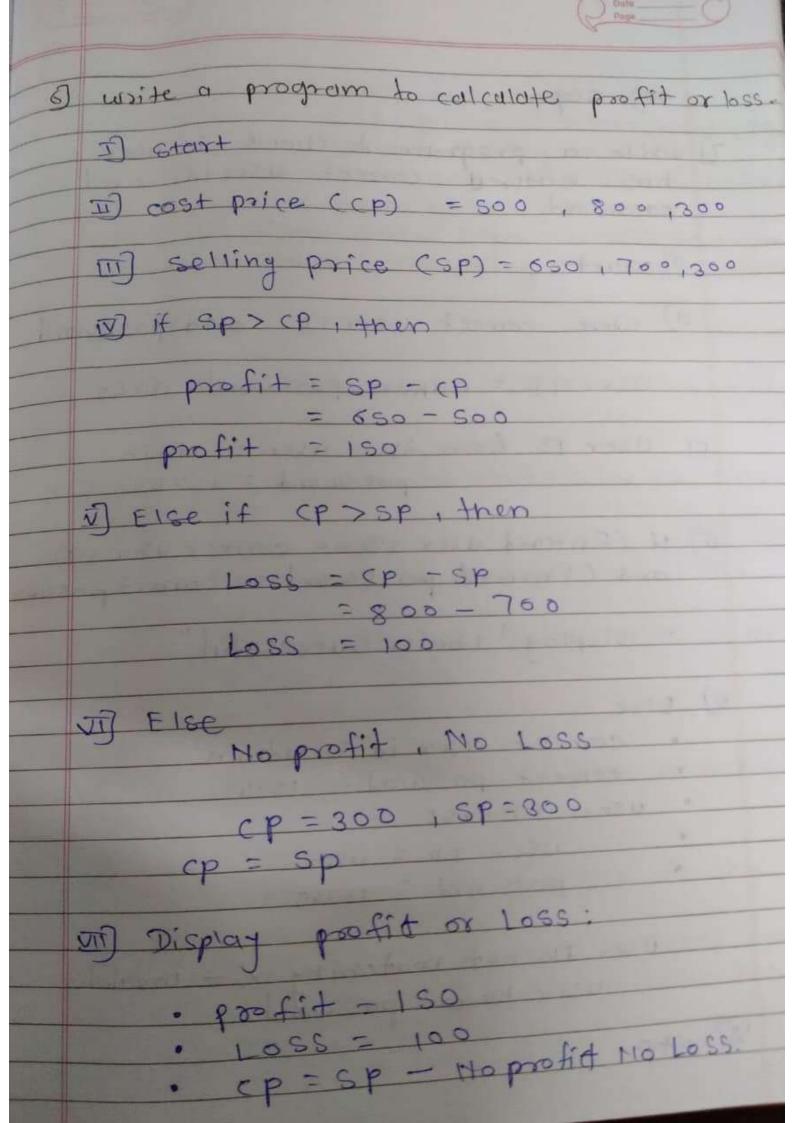
· If $a = b = c \rightarrow print$ Equilateral Triangle

· Else if a = b or b = c or $a = c \rightarrow print$ "I Sosceles tringle"

· Else if a = b or b = c or a = c print

· Else - "scalene mangle"

N) stop.



VIII) Stop.

Durite a program to check if user has entered correct user id and password.

1 Stort

1) store correct user 10 and password

User 1D = admin, password = 1234s

III User ID from the user = admin
password = 12348

If (Entered user ID == correct user ID)
and (Entered password == correct password)

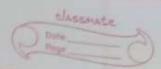
- Display " Login Successful"

V) Else

- · correct user id = admin
- · correct password = 12345
- · user enters:
- · USEY ID = USEY
- * password = 12345

user 10 or passward.

I stop



enter userid and passward. After varifying userid and password display a 4 digit random number and ask user to enter the same if user enters the same number then show him success mossige otherwise failed (something the captora)

password. The user to enter user to and

password. The enter user ID and

in check if user id and password are

· If correct -> display "invalid user in or password" stop.

· Else -> continue.

(CAPTCHA).

Doisplay the random number to the

II) Ask the user to enter the number again. VIII) If the entered number = generated random number -> Display "login successful"

Flee.

Display "Logine Failed (CAPTCHA mismata)

Stop.

Thrut 5 subject marks marks from user and display grade (eg: First secon class...)

1 start

I) input marks of 5 subject from the year

of calculate the total marks = sum of all s

(5×100)) × 100 (each sub is out of 100).

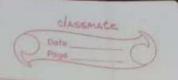
V) Apply conditions for grade:

· If percentage > 60 -> first class
· If so & percentage < 60 -> second class
· If 40 & percentage < 50 -> third class
· If percentage < 40 -> fail

Sub 1 = 65 1 Sub 4 = 80

Sub 2 = 70 1 Sub 5 = 75

Sub 3 = 88



Total = 65 + 70 + 58 + 80 + 75 -

= 5 × 100 = 500

percentage - 348 × 100

· percentage = 69.6% > 60%, the grade is first class.

III) stop.

eligible to marry or not (male age >= 21)

and femalle age >= 18)

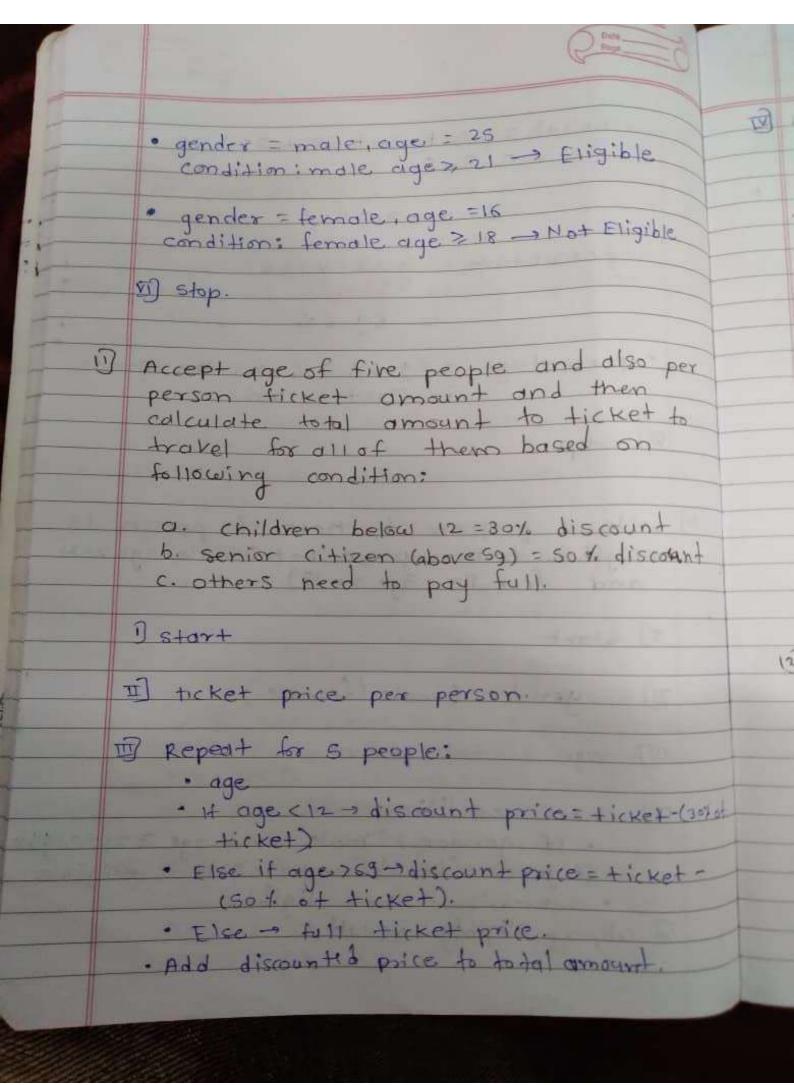
I) gender (male/female).

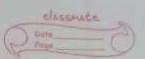
in age of the person

IV) check condition:

- · If gender = "male" and age ? 21 religible · it gender: female "and age? 18 -> eligible
- · otherwise not eligible

Deisplay eligibite result:





- I) After discounted price to total amount Let ticket price = 100 Ages of 5 people: 8,35,65,10,70
 - · person1: age 8 child 301 discount = 100 - (30% of 100) = 70
 - · person 2: age 35 hormal -> full = 100
 - · person3: age 68 senior sol discount = 100 - 50=50
 - · person 4: age 10 -> child -> 70
 - · person s: age 70 -> schior -> so

Total = 70+100+50+70+50=340

V) Stop.

13 write a program to check if given 3 digit humber is a palindrome or not.

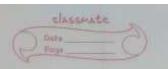
I) Start

1) a 3 digit number

III) Extract digits:

· last digit = hum 1. 10 · middle digit = (num 11 10) 1. 10

· first digit = num / Reverse the number = (last-digit + 100) + (middle-digit + 10) + first-digit · - (1 * 100) + (2 * 10) + 1 Reverse number = 121 · since 121 = 121 -> palindrome · first digit =1 · middle digit = 2 · last digit =3 = (3 * 100) + (2 * 10) +1 REVESSE = 321 humber · since 321 # 123 -> Not palindrome of if reverse = original - paridoome Flac -> Not polidrome vi) Display result. 121 = 121 -> polindrome 321 = 123 -> Hot palin drome Stop.



13) write a program to input electricity unit charges and calculate total electricity bill according to the given condition:

For first so units Rs. 0.50/unit For next 100 units Rs. 0.75 / unit For next 100 units Rs. 1.20 | Unit for Aunit above 250 Rs 1.50 lunit An additional surcharge of 2011 is added to the bill.

1] Sterrt

II) units consumed

Initialize bill=0

D conditions:

- · It units & so > bill = units x o. so
- · Else if units < 150
- bill = (Sox 0.So) + (units-so) x 0.75
- · Else if units < 250
- bill = (so x 0. so) + (100x 0.75) + (units -150) x 1.20
- Fise (units > 250) bill = (50 x 0.50) + (100 x 0.75) + (100 x 120) + units - 250) x 1. 50

bill = 2 S+7 S+120+75 bill = 295

