Task no: 7. Utilizing functions' concepts in python. Godramered.

APM: To waste the Python program wing. furctions corcente in python programming.

7.1 you are developing a small python script. to analyze and manipulate alist-of-student goodes for a class project write a python Program. that staisties the above requirements using. the bott -in functions point(), lend), type(), max (), min(), sosted (), reversed (), and range 1). : 1940xp 1 5280ve a

1. stort the program.

2. Part a welcome message: outputs a simple. greating.

3. Determine and paind the number of students: uses lends to find the number of elements in the

u. Point the type of 13ths: uses type) to show the type of the Student-names and student-grades

s. find and Point highest and lowest goades; uses maxi) and min() to determine the highest and. lowest values the student grades.

6. Port trava sox ted 113+ of goodes: Uses. roversed - sorted () to sort the grades.

1. point reversed 18+ of good es: uses acressed () to reverse the sorted 131- and converts Pt toalist.

8. Generate and print a range of grade indig uses range () to create on 191 of indices from 1 to the number of students.

output: welcome to the student Grades Analyzon. Number of studente: 4: 00000 2 1011 1000 Type of student - names list: cclass listy

Type of student - grader list: cclass 118ty Highest grade: 92. (for lower - grade 18 and 18 there to the Soxted grades: (18/185,190,92) Reversed grades: [92,190,185,78] Creade indices from 1 to number of students

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Low analyze - student - grades():
Hagram :-
 student-named = ["Alice", "Bob", "chaslie", "Drana"].
# Sample data.
 Studen1 - grades = [85,92,78,90].
# 1. Paint a wellome message.
prent ("welcome to the studente areader Analyzon! hill)
# 2 betermine and print the number of Itudents.
non-students: len (student-names).
 paint ("number of students:" num-students).
# 3. Pant the type of the student names 194 and.
TRIFIL ("In Type of Student-names list;", type (student_names)
If u. find and print the highest and lowest grate.
 highest -grade = MAX (student - grades).
 lowest -grade = mPn (student - grades).
Print ("In Highest grade:", highest - grade).
Print ("lowest grade:", lowest -grade).
# 5. Paint the 191 of grades soxted in oxerdage
 oxden
  sorted- grades = sorted (student-grades).
 Privit ("In souted broades:", souted - grades)
## 6 . Point the 18% of gooder in revenue order revenue
 grades = (.
194 (reversed (sorted-grades)).
 Print I" Reversed grades: ", reversed grades)
II T. Generate and Print a range of grade.
 Phatices from 1 to the number of students.
  grade - indica = 18+ (range (1, nom_ stoden tot))
Point ("In Grade indics from 1 to number of.
 Students: ", grade - indires).
# RUN the analysis.
  analyze - student gradey ()
```

7.2 you are tosked with creating a small. calculator application to help wers perform. anthmetic operations and greet them with a personalized regage your application should perform the following tasks: Addition, wb. - Haction, multipleation, division, 2 AMA OF TO THE STORE

Algorithm:

- 1. Start the Program.
- 2. Wer input for numbers: The program prompt the uses to enter two numbers.
- 3. Wer inputs for operations: The pageam pampts the user to choose an asithernatic operation. (add; hon, Subtraction, multiplication, division).
- 4. perform operation: Based on the user's choice the program performs the chosen arithmetic operation using the defined functions.
- 5. Duplay Results The Program displays the result of the operation.

G. Stop.

, Bodsow

def add (aib):

"" " Return the sum of two numbers.""" return atb.

""" Retorn the deflerence between two numbers." def Subtract (a,b); return a-b.

1et multiply (aib):

""" Return the product of two numbers."" return at b.

det divide (a,b)

""" Return the quotient of two numbers. Handley division by zero"""

If b1 = 0:

output: How we have to work and Arithmetic obesations: Sum of wands to taller as son of the Difference between 10 and 5:51. Productofford Solom rodand another + of 10 and s:2.0. matisopla mosport soit trol2 .1 Greeting: Herro, Arceinselcomet torthe program THE USER TO CHOOSE BY ORITHMONTH CONTRACTOR (Silvil, ashorifillom, as Hourtdue, northishe) is the police seed on the order is choice the pregram textorms thechecked on pristand be it of the toties with forestiers -11 pholosip underen syl & flored hoping 5 100H00000 5H to +1 425 more post seems of the section of the section of ilding the Al

getorn alp else RETURN " ETROF: DWISTON PASERO, of dreet (nowe): " " " Betore a dreeted mercade for the otal" " " return f" Hello, Ename & 1. wekome to the program. det main!); # Demonstrating theuse of user-defined forchang # ARTH metic operations Nom 1 =10. nom 2 = 6. Print ("A rithmetic operations:") bruy (tilon of Evaniz and Evaniz; "off Evani Laurs)) Print (f" Difference between Enumis and Enumssi; subtract [num1, num2)). Bourt (t, boognet of funnist and gums? in" multiply (nom 1, nom 2). Print (f" anotion tot Enumis and Enumsis:", divide (nom 1, xom 2) # Greeting the user Wer - rame = "Alioco" Pront + ("In Greeting:"). Front (greet (user -rame)) # Run the main function. if - name - = = " reain -"; main 1).

Result: - Thus the python programmy fortions concepts was successfully executed and the output. was vorified. VELTREE PERFORMANCE (SE) RESULT AND ANALYSIS VIVAVOCE (5) RECOMP(5) TOTAL (20)