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|  | ASSIGNMENT #2 - GRADED!! |
| Brief description | Complete the following activities to practice what you have been taught till date.  Comment your code using (#) describing what each line shows. Paste your code in the space underneath.   1. Loan Repayment [**5 marks**]   Write a program that helps a loan company determine the payment schedule for loans given out. The program should:   * 1. Accept an amount to be borrowed from the user.   2. Accept the interest rate per annum.   3. Number of years which the user would like to repay.   4. Print out the repayment schedule in months (of course you should convert year(s) to months).   See the image below for an **example** of what is required. Do not use the same values.     |  | | --- | | **Code** | | #%%  amountBorrowed = float(input("Enter the amount to borrow: "))  rate = float(input("Enter the applied rate per anum: "))  year = float(input("Enter loan duration in years: "))  #Begin process  interest = amountBorrowed \* (rate/100) \* year  amountPayable = amountBorrowed + interest  month = int(year \* 12)  amountToBePaid = amountPayable/month  print("Pmt /t/t, Amount Paid /t/t Remaining Balance")  print("------/t/t -------/t/t ---------")  counter = 0  while(counter <= month):  if(counter == 0):  amountToBePaid = 0  print(counter,"\t", "NGN", round(amountToBePaid,1),"\t\t", round((amountPayable),2))  amountToBePaid = amountPayable/month  counter += 1  #amountPayable -= amountToBePaid  else:  print(counter,"\t", "NGN", round(amountToBePaid,1),"\t\t", round((amountPayable-amountToBePaid),2))  amountPayable = amountPayable-amountToBePaid  counter += 1 |  1. Multiplication table [**5 marks**]   Write a program that generates a multiplication table for all numbers between 1 and 10. You should use iterations (for or while loops) and your output should look similar to this:  X 1 2 3 4 5 6 7 8 9  1 1 2 3 4 5 6 7 8 9  2 2 4 6 8 10 12 14 16 18  3 3 6 9 12 15 18 21 24 27     |  | | --- | | **Code** | | counter = [1,2,3]  heading = ["X"]  set =[]  for i in range(1, 10, 1):  heading.append(i)  for i in heading:  print(i, "\t", end="")  print("\n")  j = 0  while j<len(counter):  print(j+1, "\t", end="")  for i in range(1, 10, 1):  set.append(i \* counter[j])  for i in set:  print(i, "\t", end="")  print("\n")  j += 1  set = [] |  1. Given the code below, it should become very clear to you (hopefully) that the program cannot compute the number of N100, N50, N20, N10, N5, and/or coins that are required to make the entire payment. You are thus required to modify the program to do this. Your answer should include the code below i.e., it should be the full program and not just your portion. [5 **marks**]   amount = float(input("Please enter the amount e.g. 4560.32 for N4560.32: N"))  N1000 =amount // 1000  remaining = amount % 1000  amount = remaining  N500 = amount // 500  remaining = amount % 500  amount = remaining  N200 = amount // 200  remaining = amount % 200  amount = remaining  N100 = amount // 100  remaining = amount % 100  amount = remaining  N50 = amount // 50  remaining = amount % 50  amount = remaining  N20 = amount // 20  remaining = amount % 20  amount = remaining  N10 = amount // 10  remaining = amount % 10  amount = remaining  N5 = amount // 5  remaining = amount % 5  amount = remaining  remaining = round((amount % 5),2)  print("Here’s the breakdown:")  print("N1000: " + str(N1000))  print("N500: " + str(N500))  print("N200: " + str(N200))  print("N100: " + str(N100))  print("N50: " + str(N50))  print("N20: " + str(N20))  print("N10: " + str(N10))  print("N5: " + str(N5))  print("Here’s what’s remaining: N" + str(remaining))   1. Create a basic tax calculator using **four** variables, **base pay**, **amount of tax to be taken**, **tax paid** and **pay after tax**. Assign a **20000** to base pay and **20** (%)to amount of tax to be taken. Write **two calculations** which will work out tax paid and pay after tax. Print **both** these variables with a message explaining what they show. **[3 marks]**  |  | | --- | | **Code** | | amount = float(input("Enter the amount: "))  tax = float(input("Enter the tax: "))  taxTaken = amount\*(tax/100)  payAfterTax = amount - taxTaken  print("Tax taken: $", round(taxTaken,2))  print("Pay After Tax: $", round(payAfterTax,2)) |  1. Create a **statement** which asks for the user's grade. Use **if-else statements** to output the **message** “Good job”, for A; “Pretty good”, B; “Passed”, C; “Not so good”, D; E & F “Failed”. **[2 marks]**  |  | | --- | | **Code** | | grade = input("Enter your grade:").upper()  if(grade == 'A'):  print("Good Job")  elif(grade == 'B'):  print("Pretty Job")  elif(grade == 'C'):  print("Passed")  elif(grade == 'D'):  print("Not Good")  elif(grade == 'E' or grade == "F"):  print("Failed")  else:  print("Grade not recognised") | |
| Details of student output | This is an individual task. |
| Grading and weighting (**20%**  total marking for unit) | Graded = 20% |
| Submission format | Save the file as **SURNAME\_FIRSTNAME\_ASSIGNMENT2** and upload to the LMS platform or as advised by the instructors.  **Please** adhere to this file the naming convention **please**! |