01219114 & 01219115

Week 2 Assignment

Deadline: 22 August 2023, 23:59
Submission:
1. Create StudentID_Firstname_Wk2 folder, where StudentID is your KU ID and Firstname is your given name.
2. Place files to submit: diner.py. (Do not forget to rename the given file: diner_posted.py)
3. Compress the folder and submit the compressed file in Google Classroom by the submission deadline (Your compressed file should be named under <u>StudentID_Firstname_Wk2</u>)
4. Submit a summary text file (filename: wk2_summary.txt).   In this summary, tell us what you have completed and what you have not.   Submit in Google Classroom as well.
Grading Criteria:
1. Correctness (75%): Your program must run and give the expected result. Make sure your function names are defined correctly.
2. Cleanliness (25%): Your program must follow PEP8 convention; comments are added for others to understand your code easily.
You can check out about PEP 8 convention here: **https://www.python.org/dev/peps/pep-0008/**

Write the Python program that takes order and computes the payment at the SKE diner restaurant.   This diner serves a lunch set that comes with 4 food types: appetizer, entrée, dessert and drink.

The program starts with reading information of a diner customer. Then, the program shows basic menus for different food types. In addition, the program provides some suggested menus based on age and gender.

The customer does not have to choose food for all 4 food types. He/she can input 'none' for unwanted food type.

After taking the order, the program will compute total payment from the customer's choice.   Then, if the customer is a diner member, the 10% discount will be applied.   At the end, the program displays the summaries of order and receipt.

Your program must contain the following functions:

Function name	Function inputs	Function output	Functionality
read_customer_info	None	Name, age, gender and member status	Read name, age, gender and member status from customer and return these values.
get_suggested_menu *This function is given. You can call this function to use it. Do not edit inside this function.*	age and gender	One suggested appetizer and two suggested entrees	Based on the given age and gender, the function will return 1 suggested appetizer and 2 suggested entrees. *This function uses selection concept that we will learn in the following week.*

take_order	One suggested appetizer and two suggested entrees	Customer's choices of appetizer, entrée, dessert and drink	• For each food type, this function shows the basic menus, along with the suggested ones, and asks the customer to select his/her choice. • If the customer does not want any specific food type, he/she will enter 'none' for that type. • This *take_order()* function must call *take_app_order(), take_entree_order(), take_dessert_order()*, and *take_drink_order()* to read choice for each food type. • This function returns all 4 choices.
take_app_order	Suggested appetizer	Customer's choice of appetizer	Show 2 basic appetizers (*salad and soup*) and 1 suggested appetizer. Then, read and return customer's appetizer choice.
take_entree_order	Two suggested entrees	Customer's choice of entrée	Show 2 basic entrees (pizza and pasta) and the other 2 suggested entrees. Then, read and return customer's entree choice.
take_dessert_order	None	Customer's choice of dessert	Show menu of desserts, read and return customer's dessert choice.
take_drink_order	None	Customer's choice of drink	Show menu of drinks, read and return customer's drink choice.
get_prices *This function is given. You can call this function to use it. Do not edit inside this function.*	Customer's choices of appetizer, entrée, dessert and drink	Prices for appetizer, entrée, dessert and drink	From the customer's choices of appetizer, entrée, dessert and drink, this function returns prices of appetizer, entrée, dessert and drink. *Note If the customer's choice is not found in the menu, it will be replaced with 'none' choice. This function uses dictionary concept that we will learn later.*
calculate_payment	Customer's choices of appetizer, entrée, dessert and drink	Total payment	This function will call function get_prices to find out prices for the customer's choices. Then, it will compute and return total payment that is the summation of all 4 prices.
apply_discount *This function is given. You can call this function to use it.*	Total payment and member status	Discount	If the member status is 'Yes', give 10% discount. *This function uses selection concept that we will learn in the following week.*

Do not edit inside this function.			
summarize_order	Customer's name, and choices of appetizer, entrée, dessert and drink	Text contains information about the order	Construct and return a string that gives the summary what the customer has ordered.
summarize_receipt	Total payment and discount	Text contains information about the payment	Construct and return a string that gives the summary of total payment, discount, and final payment. Final payment is the total payment deducted by the discount.

Menus and Prices: For 'none' choice, price is 0 Baht.

Basic Appetizer Menu	Price (Baht)		Basic Entree Menu	Price (Baht)
salad	50		pizza	170
soup	79		pasta	250
Suggested Appetizer Menu	Price (Baht)		Suggested Entree Menu	Price (Baht)
fries	55		fish and chips	235
shrimp cocktail	150		sandwich	209
gratin	80		fried chicken	225
			hamburger	299
Dessert Menu	Price (Baht)		beef burrito	340
apple pie	170		fish steak	220
cheesecake	155		BBQ ribs	430
			steak	390
Drink Menu	Price (Baht)		broiled fish	349
water	15		baked chicken	320
soda	30		meatloaf	280
juice	65		stew	399
tea	70			
coffee	80			

Sample Outputs (Shell Mode):

```
>>> read_customer_info()
Welcome to SKE diner
Please enter your name: >? Ann
Please enter your age: >? 15
Please enter your gender (F/M): >? F
Are you diner member (Yes/No): >? No
('Ann', 15, 'F', 'No')
>>> take_app_order('fries')
Appetizer menu: soup, salad, fries, or none
Select appetizer choice: >? salad
'salad'
>>> take_entree_order('BBQ ribs', 'steak')
Entree menu: pasta, pizza, BBQ ribs, steak, or none
Select entree choice: >? steak
'steak'
>>> take_dessert_order()
Dessert menu: apple pie, cheesecake, or none
Select dessert choice: >? none
'none'
```

```
>>> take_drink_order()
Drink menu: water, soda, juice, tea, coffee, or none
Select drink choice: >? tea
'tea'
>>> take_order('shrimp cocktail', 'beef burrito', 'fish steak')
Appetizer menu: soup, salad, shrimp cocktail, or none
Select appetizer choice: >? salad
Entree menu: pasta, pizza, beef burrito, fish steak, or none
Select entree choice: >? pizza
Dessert menu: apple pie, cheesecake, or none
Select dessert choice: >? none
Drink menu: water, soda, juice, tea, coffee, or none
Select drink choice: >? soda
('salad', 'pizza', 'none', 'soda')
>>> calculate_payment('soup', 'pasta', 'apple pie', 'water')
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>>> summarize_order('Ann', 'soup', 'pasta', 'apple pie', 'water')
'Thank you, Ann, for visiting the diner.\nToday, you've ordered:\nsoup for appetizer,\npasta for
entree,\napple pie for dessert,\nand water for drink.'
>>> summarize_receipt(510, 51)
'Your total payment is 510.00 Baht.\nYou receive 51.00 Baht for discount.\nYour final payment is
459.00 Baht.'
```

Sample Outputs for entire program:

Sample Output 1

```
Welcome to SKE diner
Please enter your name: Ann
Please enter your age: 15
Please enter your gender (F/M): F
Are you diner member (Yes/No): No
Appetizer menu: soup, salad, fries, or none
Select appetizer choice: soup
Entree menu: pasta, pizza, fish and chips, sandwich, or none
Select entree choice: pasta
Dessert menu: apple pie, cheesecake, or none
Select dessert choice: apple pie
Drink menu: water, soda, juice, tea, coffee, or none
Select drink choice: water

Thank you, Ann, for visiting the diner.
Today, you've ordered:
soup for appetizer,
pasta for entree,
apple pie for dessert,
and water for drink.
Your total payment is 514.00 Baht.
You receive 0.00 Baht for discount.
Your final payment is 514.00 Baht.
```

Sample Output 2

```
Welcome to SKE diner
Please enter your name: Bob
Please enter your age: 35
Please enter your gender (F/M): M
Are you diner member (Yes/No): Yes
Appetizer menu: soup, salad, shrimp cocktail, or none
Select appetizer choice: salad
Entree menu: pasta, pizza, BBQ ribs, steak, or none
Select entree choice: BBQ ribs
Dessert menu: apple pie, cheesecake, or none
```

```
Select dessert choice: none
Drink menu: water, soda, juice, tea, coffee, or none
Select drink choice: soda

Thank you, Bob, for visiting the diner.
Today, you've ordered:
salad for appetizer,
BBQ ribs for entree,
none for dessert,
and soda for drink.
Your total payment is 510.00 Baht.
You receive 51.00 Baht for discount.
Your final payment is 459.00 Baht.
```

Sample Output 3

```
Welcome to SKE diner
Please enter your name: Cindy
Please enter your age: 65
Please enter your gender (F/M): F
Are you diner member (Yes/No): Yes
Appetizer menu: soup, salad, gratin, or none
Select appetizer choice: none
Entree menu: pasta, pizza, broiled fish, baked chicken, or none
Select entree choice: baked chicken
Dessert menu: apple pie, cheesecake, or none
Select dessert choice: cheesecake
Drink menu: water, soda, juice, tea, coffee, or none
Select drink choice: tea

Thank you, Cindy, for visiting the diner.
Today, you've ordered:
none for appetizer,
baked chicken for entree,
cheesecake for dessert,
and tea for drink.
Your total payment is 545.00 Baht.
You receive 54.50 Baht for discount.
Your final payment is 490.50 Baht.
```

Sample Output 4

```
Welcome to SKE diner
Please enter your name: David
Please enter your age: 18
Please enter your gender (F/M): M
Are you diner member (Yes/No): No
Appetizer menu: soup, salad, fries, or none
Select appetizer choice: fries
Entree menu: pasta, pizza, fried chicken, hamburger, or none
Select entree choice: hamburger
Dessert menu: apple pie, cheesecake, or none
Select dessert choice: cheesecake
Drink menu: water, soda, juice, tea, coffee, or none
Select drink choice: juice

Thank you, David, for visiting the diner.
Today, you've ordered:
fries for appetizer,
hamburger for entree,
cheesecake for dessert,
and juice for drink.
Your total payment is 574.00 Baht.
You receive 0.00 Baht for discount.
Your final payment is 574.00 Baht.
```