LEARNING LOGICAL PROGRAMMING WITH

STUDY CASE

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INFORMATICS MANAGEMENT STUDY PROGRAM

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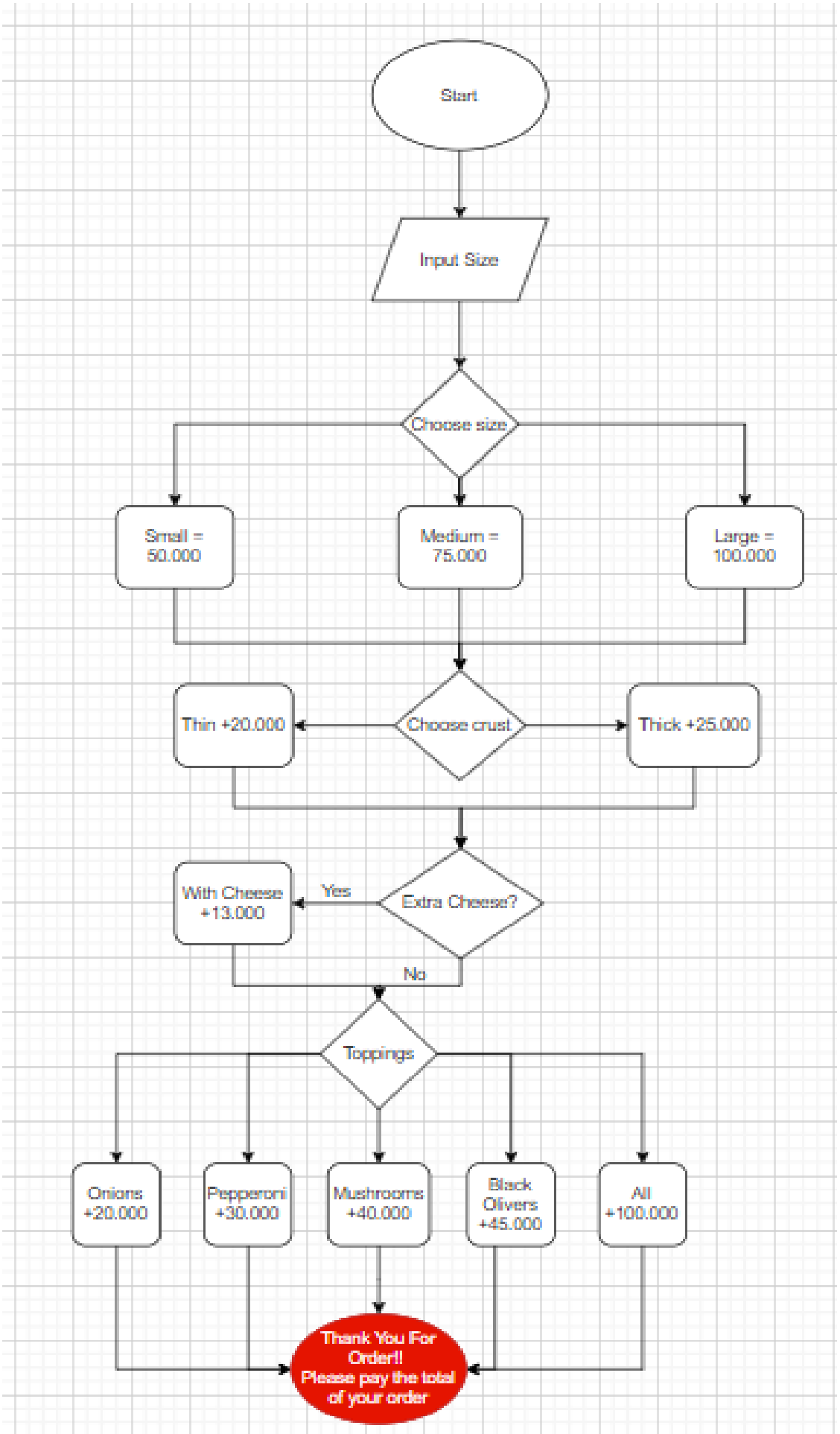

Start
Input Size
Choose size
Small = 50.000
Medium = 75.000
Large = 100.000
Thin +20.000
Choose crust
Thick +25.000
With Cheese +13.000
Yes
Extra Cheese?
No
Toppings
Onions +20.000
Pepperoni +30.000
Mushrooms +40.000
Black Olivers +45.000
All +100.000
Thank You For Order!! Please pay the total of your order

EXPLANATION:

1. **Start**: The process begins.

2. **Input Size**: The system prompts the user to choose a pizza size.

3. **Choose size**: The user selects one of three sizes: Small, Medium, or Large.

4. **Size Pricing**: Each size has a base price:
   - Small: 50.000
   - Medium: 75.000
   - Large: 100.000

5. **Choose crust**: The user selects a crust type: Thin or Thick.

6. **Crust Pricing**: Each crust type adds to the cost:
   - Thin: +20.000
   - Thick: +25.000

7. **Extra Cheese?**: The system asks if the user wants extra cheese.

8. **Cheese Pricing**: If "Yes," extra cheese adds 13.000 to the price.

9. **Toppings**: If the user selected "No" to extra cheese, the system prompts the user to choose toppings. Multiple toppings are possible.

10. **Topping Pricing**: The available toppings and their costs are:
    - Onions: +20.000
    - Pepperoni: +30.000
    - Mushrooms: +40.000
    - Black Olivers: +45.000
    - All: +100.000 (presumably all of the above)

11. **Thank You For Order!! Please pay the total of your order**: After selecting toppings, the order is complete, and the user is prompted to pay the final total. The total price is calculated by summing the base price, crust cost, cheese cost (if any), and topping cost(s).

CODE:

C: > Users > WINDOWS 10 > Downloads > Practice Group.py > ...

```python
print(" !!!!!WELCOME!!!!! ")
print(" Do you want to buy pizza? please select the menu^^ ")

# Define pizza size
small_pizza = 50000
medium_pizza = 75000
large_pizza = 10000

# Define crust prices
thin_crust = 20000
thick_crust = 25000

# Define extra cheese price
extra_cheese_price = 13000 # Mengubah nama variabel untuk menghindari bentrok

# Ask user for pizza size
pizza_size = input("What size of pizza do you want? (small, medium, large): ")

# Calculate pizza price based on size
if pizza_size.lower() == "small":
    pizza_price = small_pizza
elif pizza_size.lower() == "medium":
    pizza_price = medium_pizza
elif pizza_size.lower() == "large":
    pizza_price = large_pizza
else:
    print("Invalid pizza size. Please choose small, medium, or large.")
    pizza_price = 0

# Ask user for crust type
crust_type = input("What type of crust do you want? (thin, thick): ")

# Calculate crust price
if crust_type.lower() == "thin":
    crust_price = thin_crust
elif crust_type.lower() == "thick":
    crust_price = thick_crust
else:
    print("Invalid crust type. Please choose thin or thick.")
    crust_price = 0

# Ask user for extra cheese
extra_cheese = input("Do you want extra cheese? (yes, no): ")

# Calculate extra cheese price
if extra_cheese.lower() == "yes":
    extra_cheese_cost = extra_cheese_price  # Menggunakan harga keju tambahan
else:
    extra_cheese_cost = 0  # Jika tidak ingin keju tambahan, biayanya 0

# Ask user for toppings
toppings = input("What toppings do you want? (onions, pepperoni, mushrooms, black olives, all): ")

# Calculate topping price
if toppings.lower() == "onions":
    topping_price = 20000
elif toppings.lower() == "pepperoni":
    topping_price = 30000
elif toppings.lower() == "mushrooms":
    topping_price = 40000
elif toppings.lower() == "black olives":
    topping_price = 45000
elif toppings.lower() == "all":
    topping_price = 100000
else:
    print("Invalid topping. Please choose onions, pepperoni, mushrooms, black olives, or all.")
    topping_price = 0

print(" !!! Thank you for your order in 2024I's Pizza !!! ")
# Calculate total price
total_price = pizza_price + crust_price + extra_cheese_cost + topping_price

def format_rupiah(value):
    return " Your Final Price is: Rp {:,}".format(value).replace(",", ".")

nilai = total_price
print(format_rupiah(nilai))
```

EXPLANATION EACH COMMAND:

```
1  print(" !!!!!WELCOME!!!!! ")
2  print(" Do you want to buy pizza? please select the menu^^ ")
```

Explanation:
As we can see, we use "print("WELCOME") to show WELCOME to user, This code provides an initial welcome in the pizza selling app. By adding more interactive elements such as input() and menu options, this application can develop into a more functional and attractive pizza ordering system for users.

```
4  # Define pizza size
5  small_pizza = 50000
6  medium_pizza = 75000
7  large_pizza = 10000
```

Explanation:
As we can see, we use 3 variable that is small_pizza, medium_pizza and large_pizza and for the price we add is
small_pizza = 50000
medium_pizza = 75000
large_pizza = 100000

```
13  # Define extra cheese price
14  extra_cheese_price = 13000 # Mengubah nama variabel untuk menghindari bentrok
```

Explanation:
As we can see, we use this variable to add more price for extra cheese, The extra_cheese_price variable with a value of 13000 is used to determine the additional price of cheese. This variable name was chosen to prevent conflicts with other variables, which may have been defined previously in the code.

```
 9  # Define crust prices
10  thin_crust = 20000
11  thick_crust = 25000
```

Explanation:
It seems like you've defined two variables in Python to represent the prices of different types of pizza crusts.

thin_crust is a variable that stores the price of a thin crust pizza, which is 20,000 units (likely representing a currency, but the unit is not specified).
thick_crust is a variable that stores the price of a thick crust pizza, which is 25,000 units.
These variables can now be used in your Python program to perform calculations or operations related to pizza prices. For example, you could calculate the total cost of an order

with multiple pizzas, or determine the difference in price between a thin crust and a thick crust pizza.

```
16  # Ask user for pizza size
17  pizza_size = input("What size of pizza do you want? (small, medium, large): ")
```

Explanation:
The input() function is used to get user input, which is a string by default.

The prompt inside the input() function, "What size of pizza do you want? (small, medium, large): ", is displayed to the user, asking them to enter their preferred pizza size.

The user's input is stored in the pizza_size variable, which can then be used in your Python program to determine the price or other characteristics of the pizza.

```
19  # Calculate pizza price based on size
20  if pizza_size.lower() == "small":
21      pizza_price = small_pizza
22  elif pizza_size.lower() == "medium":
23      pizza_price = medium_pizza
24  elif pizza_size.lower() == "large":
25      pizza_price = large_pizza
26  else:
27      print("Invalid pizza size. Please choose small, medium, or large.")
28      pizza_price = 0
```

Explanation:
You've used an if-elif-else statement to check the value of the pizza_size variable, which was set by the user's input earlier.

You've used the lower() method to convert the user's input to lowercase, so that the comparison is case-insensitive. This means that the code will work correctly whether the user enters "small", "Small", "SMALL", etc.

You've defined three possible pizza sizes: "small", "medium", and "large". For each size, you've assigned a corresponding price to the pizza_price variable.

If the user enters an invalid size (i.e., anything other than "small", "medium", or "large"), the code will print an error message and set the pizza_price to 0.

However, I notice that you haven't defined the small_pizza, medium_pizza, and large_pizza variables anywhere in the code. You'll need to define these variables and assign them the corresponding prices for this code to work correctly.

```
30  # Ask user for crust type
31  crust_type = input("What type of crust do you want? (thin, thick): ")
```

Explanation:
The input() function is used to get user input, which is a string by default.

The prompt inside the input() function, "What type of crust do you want? (thin, thick): ", is displayed to the user, asking them to enter their preferred crust type.

The user's input is stored in the crust_type variable, which can then be used in your Python program to determine the price or other characteristics of the pizza.

```
33  # Calculate crust price
34  if crust_type.lower() == "thin":
35      crust_price = thin_crust
36  elif crust_type.lower() == "thick":
37      crust_price = thick_crust
38  else:
39      print("Invalid crust type. Please choose thin or thick.")
40      crust_price = 0
```

Explanation:
The if statement checks if the crust_type is "thin" (case-insensitive, thanks to the lower() method).

If the crust_type is "thin", the crust_price is set to the value of thin_crust.

The elif statement checks if the crust_type is "thick" (again, case-insensitive).

If the crust_type is "thick", the crust_price is set to the value of thick_crust.

If the crust_type is neither "thin" nor "thick", an error message is printed, and the crust_price is set to 0.

This code assumes that thin_crust and thick_crust are variables that have been defined earlier in the program, and that they contain the prices for thin and thick crusts, respectively.

```
42  # Ask user for extra cheese
43  extra_cheese = input("Do you want extra cheese? (yes, no): ")
```

Explanation:
The input() function is used to get user input, which is a string by default.
The prompt inside the input() function, "Do you want extra cheese? (yes, no): ", is displayed to the user, asking them if they want extra cheese on their pizza.
The user's input is stored in the extra_cheese variable, which can then be used in your Python program to determine the price or other characteristics of the pizza.

```
45  # Calculate extra cheese price
46  if extra_cheese.lower() == "yes":
47      extra_cheese_cost = extra_cheese_price  # Menggunakan harga keju tambahan
48  else:
49      extra_cheese_cost = 0  # Jika tidak ingin keju tambahan, biayanya 0
```

Explanation:
You've used an if-else statement to check the value of the extra_cheese variable, which was set by the user's input earlier.

If the user wants extra cheese (extra_cheese.lower() == "yes"), the extra_cheese_cost is set to the value of extra_cheese_price. This assumes that extra_cheese_price is a variable that has been defined earlier in the program, and that it contains the price of extra cheese.

If the user doesn't want extra cheese (extra_cheese.lower() != "yes"), the extra_cheese_cost is set to 0.

However, I notice that you haven't defined the extra_cheese_price variable anywhere in the code. You'll need to define this variable and assign it the price of extra cheese for this code to work correctly.

```
# Ask user for toppings
toppings = input("What toppings do you want? (onions, pepperoni, mushrooms, black olives, all): ")
```

Explanation:
The input() function is used to get user input, which is a string by default.

The prompt inside the input() function, "What toppings do you want? (onions, pepperoni, mushrooms, black olives, all): ", is displayed to the user, asking them to enter their preferred toppings.

The user's input is stored in the toppings variable, which can then be used in your Python program to determine the price or other characteristics of the pizza.

```
# Calculate topping price
if toppings.lower() == "onions":
    topping_price = 20000
elif toppings.lower() == "pepperoni":
    topping_price = 30000
elif toppings.lower() == "mushrooms":
    topping_price = 40000
elif toppings.lower() == "black olives":
    topping_price = 45000
elif toppings.lower() == "all":
    topping_price = 100000
else:
    print("Invalid topping. Please choose onions, pepperoni, mushrooms, black olives, or all.")
    topping_price = 0
```

Explanation:
if toppings.lower() == "onions":: Checks if the user input is "onions" (case-insensitive). If true, sets topping_price to 20,000.
elif toppings.lower() == "pepperoni":: Checks if the user input is "pepperoni" (case-insensitive). If true, sets topping_price to 30,000.
elif toppings.lower() == "mushrooms":: Checks if the user input is "mushrooms" (case-insensitive). If true, sets topping_price to 40,000.
elif toppings.lower() == "black olives":: Checks if the user input is "black olives" (case-insensitive). If true, sets topping_price to 45,000.
elif toppings.lower() == "all":: Checks if the user input is "all" (case-insensitive). If true, sets topping_price to 100,000.
else:: If none of the above conditions are met, prints an error message and sets topping_price to 0.

```
print(" !!! Thank you for your order in 2024I's Pizza !!! ")
# Calculate total price
total_price = pizza_price + crust_price + extra_cheese_cost + topping_price
```

Explanation:
print(" !!! Thank you for your order in 2024I's Pizza !!! "): Prints a thank-you message to the user.
total_price = pizza_price + crust_price + extra_cheese_cost + topping_price: Calculates the total price by adding up the individual prices of the pizza, crust, extra cheese, and toppings.

```
73  def format_rupiah(value):
74      return " Your Final Price is: Rp {:,}".format(value).replace(",", ".")
```

Explanation:
format_rupiah function takes a value parameter and returns a formatted string representing the price in IDR.

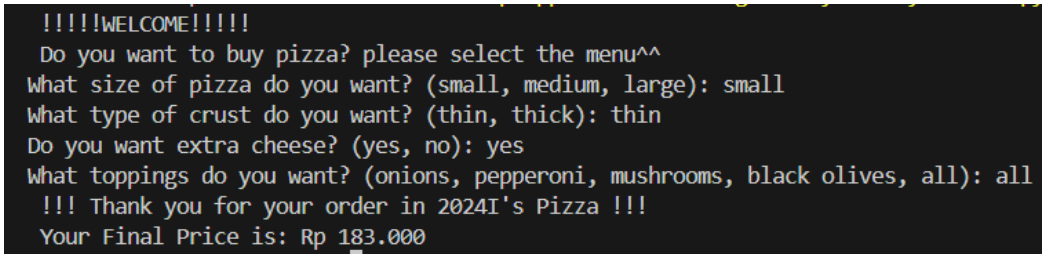
return " Your Final Price is: Rp {:,}".format(value).replace(",", "."):
The format method is used to insert the value parameter into the string template " Your Final Price is: Rp {:,}".
The :, format specifier is used to add commas as thousand separators.
The replace(",", ".") method is used to replace the commas with periods, as IDR uses periods as thousand separators and commas as decimal separators.

```
76  nilai = total_price
77  print(format_rupiah(nilai))
```

Explanation:
uses the format_rupiah function to format the total_price value and prints the result to the console.

nilai = total_price: Assigns the total_price value to a new variable nilai.
print(format_rupiah(nilai)): Calls the format_rupiah function with the nilai variable as an argument and prints the resulting formatted string to the console

OUTPUT EXPLANATION



Explanation:
Here's a breakdown of the text from the image, which appears to be a simulated pizza ordering system:

!!!!! WELCOME!!!!!: A welcoming message.

Do you want to buy pizza? please select the menu^^: Asks if the customer wants to order and directs them to the menu. The ^^ is likely just stylistic.

What size of pizza do you want? (small, medium, large): large: The customer selected a large pizza.

What type of crust do you want? (thin, thick): thick: The customer chose a thick crust.

Do you want extra cheese? (yes, no): yes: The customer added extra cheese.

What toppings do you want? (onions, pepperoni, mushrooms, black olives, all): all: The customer selected all available toppings.

!!! Thank you for your order in 20241's Pizza !!!: A confirmation message with the (presumably) pizza place's name. Note that 20241 seems unusual for a business name.

Your Final Price is: Rp 238.000: The total price is 238,000 Indonesian Rupiah.

In short, the text shows a simple order taking process culminating in a final price. The style suggests a text-based interface, possibly a command-line application or a very basic chatbot.