**ISAT 252**

**Worksheet 4: Using Decision Structures**

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1. A chip manufacturer discounts the price of its product (usually $87) according to the amount of units the customer buys. If the customer buys between 100 and 500 units, the discount is 5% of the price per unit, a purchase of more than 500 has a discount of 7% per unit. Write the if...elif…else statement for the code below that calculates and displays the total of a purchase.

# Get input from user

units = float(input("Please enter the number of units: "))

# Calculate discount using logic

if units >= 100 and units <=500:

PurchasePrice = UNIT\_PRICE - (UNIT\_PRICE \* 0.05)

TotalPurchase = PurchasePrice \* units

elif units > 500:

PurchasePrice = UNIT\_PRICE - (UNIT\_PRICE \* 0.07)

TotalPurchase = PurchasePrice \* units

else:

TotalPurchase = UNIT\_PRICE \* units

# Output the result to the customer

print (units, "chips will cost $",format(TotalPurchase, '.2f'))

1. Determine the output displayed when the code below is executed.

num =0.0

num = float(“Number?”))

if num < 0:

print( "Negative")

elif num = 0:

print("Zero")

else:

print( "Positive")

change =0.0

dollars = 0

change = float(“enter the change”)

dollars = int(change / 100)

if change >= 100:

print("Your change contains " + \

format(dollars, '2.2f') + " dollars"

else:

print( "Your change contains no dollars.")

Output for each value entered of num Output for each value entered of num

456 ”Your change contains 4.00 dollars” -2 \_\_\_\_”Negative Number”\_\_\_\_\_\_\_\_\_\_\_

100 “Your change contains 1.00 dollars” 100 \_\_\_\_\_”Positive number”\_\_\_\_\_\_\_\_\_\_\_\_

45 “Your change contains no dollars” 0 \_\_\_\_\_”Zero”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_