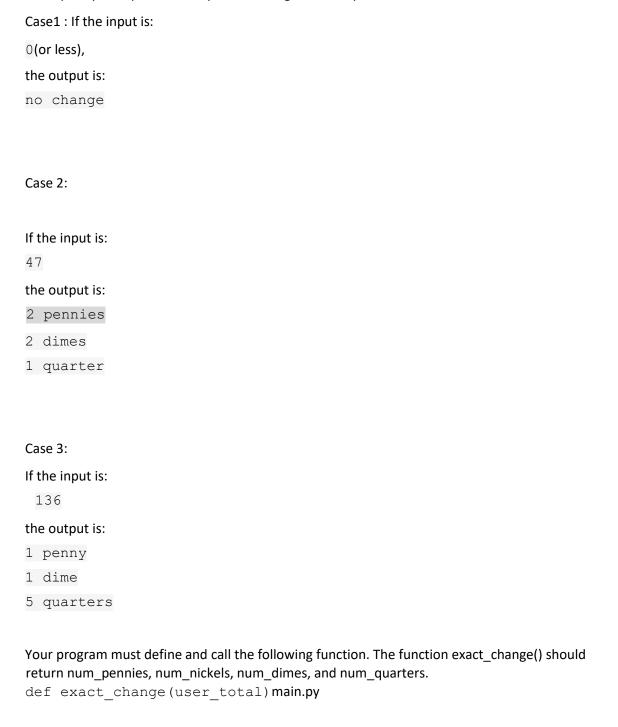
LAB: Exact change – functions

Define your function here

Define a function called exact_change that takes the total change amount in cents and calculates the change using the fewest coins. The coin types are pennies, nickels, dimes, and quarters. Then write a main program that reads the total change amount as an integer input, calls exact_change(), and outputs the change, one coin type per line. Use singular and plural coin names as appropriate, like 1 penny vs. 2 pennies. Output "no change" if the input is 0 or less.



```
if __name__ == '__main__': input_val = int(input()) num_pennies, num_nickels,
    num_dimes, num_quarters = exact_change(input_val)
```

```
in_class_activity.py ×
      def exact_change(cents):
              return "no change"
              quarter = cents // 25
              rem1 = cents % 25
              dime = rem1 // 10
              rem2 = rem1 % 10
              nickel = rem2 // 5
              rem3 = rem2 % 5
              penny = rem3
              return penny, nickel, dime, quarter
          input_val = int(input("Cents: "))
          num_pennies, num_nickels, num_dimes, num_quarters = exact_change(input_val)
          to_print = {}
          if num_pennies == 0:
          elif num_pennies == 1:
              to_print["penny"] = num_pennies
              to_print["pennies"] = num_pennies
          if num_nickels == 0:
          elif num_nickels == 1:
              to_print["nickel"] = num_nickels
              to print["nickels"] = num nickels
          if num_dimes == 0:
          elif num dimes == 1:
              to_print["dime"] = num_dimes
              to_print["dimes"] = num_dimes
          if num_quarters == 0:
          elif num_quarters == 1:
              to_print["quarter"] = num_quarters
              to_print["quarters"] = num_quarters
          for denomination in to_print:
              print(f"{to_print[denomination]} {denomination}")
      if __name__ == "__main__":
```

```
PS E:\git\cs-gsu\csc1301\lab\10> python .\in_class_activity.py
Cents: 47
2 pennies
2 dimes
1 quarter

PS E:\git\cs-gsu\csc1301\lab\10> python .\in_class_activity.py
Cents: 136
1 penny
1 dime
5 quarters
PS E:\git\cs-gsu\csc1301\lab\10> [
```

LAB: Swapping variables

Define a function named swap_values that takes four integers as parameters and swaps the first with the second, and the third with the fourth values. Then write a main program that reads four integers from input, calls function swap_values() to swap the values, and prints the swapped values on a single line separated with spaces.

```
Ex: If the input is:

3
8
2
4
function swap_values() returns and the main program outputs:
8 3 4 2
The program must define and call the following function.
def swap_values(user_val1, user_val2, user_val3, user_val4)

main.py

# Define your function here.

if __name__ == '__main__':
    # Type your code here. Your code must call the function.
```

```
in_class_activity_B.py X
 in_class_activity_B.py > ...
       def swap_values(user_val1, user_val2, user_val3, user_val4):
           _user_val1 = user_val1
           user_val1 = user_val2
          user_val2 = _user_val1
           _user_val3 = user_val3
           user_val3 = user_val4
           user_val4 = _user_val3
           return (user_val1, user_val2, user_val3, user_val4)
       def main():
           first = input("Enter first integer: ")
           second = input("Enter second integer: ")
           third = input("Enter third integer: ")
           fourth = input("Enter fourth integer: ")
           _first, _second, _third, _fourth = swap_values(first, second, third, fourth)
           print (f"Swapped: {_first} {_second} {_third} {_fourth}")
       if __name__ == '__main__':
           main()
 PROBLEMS DEBUG CONSOLE TERMINAL
 PS E:\git\cs-gsu\csc1301\lab\10> python .\in_class_activity_B.py
 Enter first integer: 3
 Enter second integer: 8
 Enter third integer: 2
○ Enter fourth integer: 4
 Swapped: 8 3 4 2
 PS E:\git\cs-gsu\csc1301\lab\10>
```