

Q1:-

Given Data	Required Results
* \$1 : 70 bills	* The motive is to take out 75.43 USD exactly from the cash register using the available denominations.
* \$2 : 1 bill	* Brainstorm for alternate accurate solutions.
* \$5 : 5 bills	* Check if the process can work for different amounts such as 89.23 USD and with different available bills/denominations.
* \$10 : 3 bills	
* \$20 : 1 bill	
* \$50 : 0 bills	
* 1¢ : 10 coins	
* 5¢ : 5 coins	
* 10¢ : 5 coins	
* 25¢ : 2 coins	
* 50¢ : 150 coins	

Processing Required	Solution Alternatives
* The target amount <del>of</del> has to be reached using the available bills (75.43 USD in this case)	* Instead of starting with largest available bills, start by using the smaller available coins and moving upto the larger bills.
* Start by taking the largest bills available and ensure it is less than the target amount. If not, then move to the next largest bill.	* Alternatively using larger bills and smaller coins can also be an accurate approach to solve this problem.
* After taking the larger bills, move on to the smaller bills and keep using it until the remaining amount is small enough to be covered by the cent coins.	
* At last, use the available cent coins to make up the remaining amount; first use the larger coins and then the smaller ones	
* Ensure that the target amount has been reached by totaling up the bills and coins.	



Q2:-

Given Data	Required Results
<ul style="list-style-type: none"> <li>* The given data are the three numbers entered by the user randomly. (For eg. : 5, 7, 10)</li> </ul>	<ul style="list-style-type: none"> <li>* The objective is to find the largest number.</li> <li>* Check for any other accurate solutions.</li> <li>* Ensure that the process works for different values given by the user.</li> </ul>
Processing Required	Solution Alternatives
<ul style="list-style-type: none"> <li>* Take the first of the 3 numbers entered by the user and compare it with the second number.</li> <li>* Then compare it with the third number.</li> <li>* If the first number is larger than both, then store it as the output. Otherwise move on to the next numbers and repeat the above mentioned process till you find the largest number and store it as output.</li> </ul>	<ul style="list-style-type: none"> <li>* <del>Selection</del> Conditional Statements, such as IF THEN ELSE, can be used to compare the numbers and find the largest.</li> <li>* Built-in functions, such as max() in Python, directly finds the largest number.</li> </ul>

Q3:-

Given Data	Required Results
<ul style="list-style-type: none"> <li>* A single number, which has to be an integer, is entered by the user.</li> </ul>	<ul style="list-style-type: none"> <li>* The objective is to find the sum of the digits of the given integer number.</li> <li>* Check for alternative correct solutions</li> <li>* Ensure that the process works for different values given by the user</li> </ul>
Processing Required	Solution Alternatives
<ul style="list-style-type: none"> <li>* Take the number entered by the user</li> <li>* Extract each digit of the number.</li> <li>* Sum up all the digits of the number and store it as output</li> </ul>	<ul style="list-style-type: none"> <li>* Define the single integer number as constant.</li> </ul>



Q4:-

### Given Data

Option 1:-

- \* The user enters a single integer number

Option 2:-

- \* The user enters 2 integer numbers.

### Required Results

Option 1:-

- \* To find out whether the given number is odd or even

Option 2 :-

- \* To check if the product of the 2 integers is odd or even.

- \* Check for alternative correct solutions.

- \* Ensure the process works for different values

### Processing Required

Option 1:-

- \* Divide the integer number by 2
- \* If it is completely divisible by 2 with no remainder, the number is even.
- \* Otherwise, it is odd.

Option 2:-

- \* Multiply the two given number to obtain the product
- \* Check the divisibility of the product by 2
- \* If it is completely divisible, the number (product) is even.
- \* Else, the product is odd

### Solution Alternatives.

- \* Define the single integer number as a constant (Option 1)

- \* Define both integer numbers as constants (Option 2)

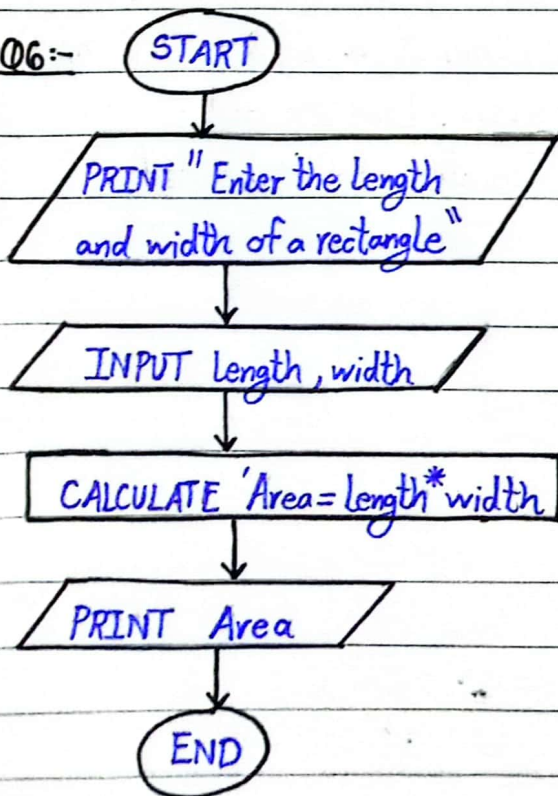
- \* To see if the number is odd or even, check the last digit of the number. If the last digit is either 2, 4, 6, 8 or 0; the number is even. Else it's odd.

- \* Modulus Operator can also be used.

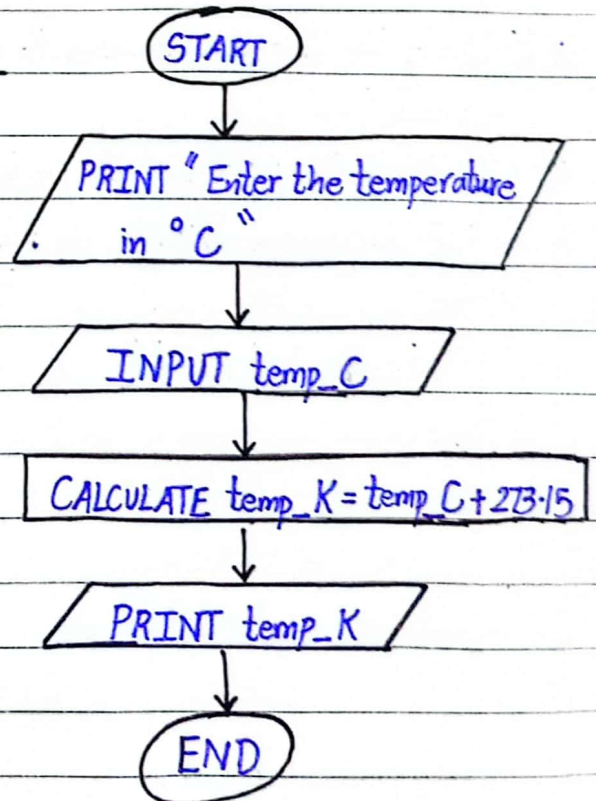
Q5:-

Input	Processing	Module Ref.	Output
* One integer number (Num)	* Enter the integer numbers	READ	* For single number: print "even" if integer is even
* Two integer numbers (Num_1 and Num_2)	* For single number: If $\frac{\text{Num}}{2}$ and Remainder=0	CALC	print "odd" if integer is odd
	then number is even else number is odd		
	* For two numbers: Product = Num_1 * Num_2	CALC	* For two number print "even" if product is even
	If $\frac{\text{Product}}{2}$ and Remainder=0	CALC	print "odd" if product is odd
	then product is even else product is odd		
	* Print "Even" OR "Odd"	PRINT	
	END		

Q6:-



Q7:-





Q8:-

