Zweck Bank is one of the leading banks in the country. They receive large amounts of Deposits periodically. They wanted to calculate interest for the amount deposited by the Account Holder. As a software developer help the bank in calculating the total returns based on the Account Type.

**Component Specification: DepositorInfo**

|  |  |  |
| --- | --- | --- |
| **Type(Class)** | **Attributes** | **Methods** |
| **DepositorInfo** | String accountNumber  String depositType  int noOfYears  double depositAmount | Necessary getters, setters and a four-argument constructor is provided as a part of the code skeleton. |

**Functional Requirement 1: Extract the details of the DepositorInfo and create an object of the DepositorInfo class.**

|  |  |  |
| --- | --- | --- |
| **Type(Class)** | **Methods** | **Responsibilities** |
| **UserInterface** | public static DepositorInfo **extractDetails**(String depositorDetails) | This method accepts **depositorDetails**separated by colon as an argument and should extract the properties of the **DepositorInfo**from the argument by parsing the **depositorDetails**. Set these values to the **DepositorInfo**object and return this object. |

**Functional Requirement 2: Calculate the Total Amount of returns the Depositor receives from the bank.**

|  |  |  |
| --- | --- | --- |
| **Type(Class)** | **Methods** | **Responsibilities** |
| **DepositorInfo** | public double **calculateTotalAmountOfReturns**() | This method is used to calculate the total amount of returns based on the **depositType**.  If the depositType is **Savings**, the rate of interest is 5% of the depositAmount.  If the depositType is **FixedDeposit**, the rate of interest is 10% of the depositAmount.  If the depositType is **RecurringDeposit**, the rate of interest is 15% of the depositAmount.  If the depositType is **SpecialPurposeDeposit**, the rate of interest is 20% of the depositAmount.    ***Condition****:*   * *The****depositAmount****and****noOfYears****should be greater than 0, else return -1.* * *The depositType can be either one of****[Savings, FixedDeposit, RecurringDeposit, SpecialPurposeDeposit]****, else return -1.* * *The****depositType****is case-insensitive.* |

**Formula to calculate the total Amount of returns to the Depositor:**

(If the depositType is Savings, the rate of interest is 5% of the depositAmount.)

rate of interest = (depositAmount \*5)/100

**Total Amount = (DepositAmount + rate of interest)\*noOfYears**

**Example**

Enter the Depositor details

23489690501:Savings:2:12000 (If the depositType is Savings, the rate of interest is 5% of the depositAmount. )

rate of interest = (12000\*5)/100 = 2000

**Total Amount= (12000+600)\*2 = 25200.0**

**Note**:

* In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user and the rest of the text represents the output.
* Ensure to follow the object-oriented specifications provided in the question.
* Ensure to provide the names for classes, attributes, and methods as specified in the question.
* Adhere to the code template, if provided.

**Sample Input / Output 1:**

Enter the Depositor details

**89765098702:FixedDeposit:9:300000**

Depositor Details

AccountNumber : 89765098702

Deposit Type : FixedDeposit

Number of years : 9

Deposit Amount : 300000.0

Total Amount Of Returns : 2970000.0

**Sample Input / Output 2:**

Enter the Depositor details

**89675678009:SpecialPurposeDeposit:-1:800**

Invalid Depositor details

**Explanation**: The noOfYears is less than 0, therefore it is an invalid input.

**Sample Input / Output 3:**

Enter the Depositor details

**34575787610:FixedDeposit:8:-1000**

Invalid Depositor details

**Explanation**: The depositAmount is less than 0, therefore it is an invalid input.

**Sample Input / Output 4:**

Enter the Depositor details

**56784567803:redDepositor:5:7000**

Invalid Depositor details

**Explanation**: This depositType is not mentioned, therefore it is an invalid input.