Question 1

Design a class that accept the account number and age of a person.

Based on the age and the account balance of the person, display the annual rate of interest available for the balance in their account.

Class name: Bank

|  |  |
| --- | --- |
| **Data Members** | Purpose |
| int acc\_num[] | to store account number |
| Int acc\_bal[] | to store the balance in the account |
| String name[] | to store the account holders name |

|  |  |
| --- | --- |
| **Member Methods** | **Purpose** |
| accept() | Accept the account number, name and balance of 10 account holders |
| compute() | Accept the account number of the holder and check if the number is present in the array, ask age of the person and display the rate of interest he/she is eligible for from the bank. If number not present then print error message "wrong number please try again"   |  |  | | --- | --- | | Account Balance | Rate of Interest | | less than equal to 10,000 | 3.5% | | 10,000+ to 2,00,000 | 4.3% | | 2,00,000+ to 9,00,000 | 4.9% | | 9,00,000+ to 1 cr | 5.4% | | 1 cr.+ | 6.3% | |
| Display() | Prints all the 10 accounts  Name - Account Number – Account Balance  XXXX XXXX XXXX |

Note: There is an additional 0.5% increase in the rate of interest for people who are 60 years or more. Write main method create an object of the class and call the above methods through the object created

Question 2

Pig Latin is a language game of alteration read in English. To form the Pig Latin form an English word the initial consonant sound is transpose to the end of the word and ay is affixed.

For example, trash yields ash-tray and plunder is under-play.

Write a program to input 10 names in an array. Print the name and their Pig Latin.

Question 3

Design a class to overload a function Joystring() as follows

1. void joystring(string s, char ch1, char ch2) - with one string and two character arguments that replaces the character argument ch1 with the character argument ch2 in the given string s and print the new string.

Example input value of s =”TECHNALAGY”, ch1=’A’, ch2=’O’

Output=”TECHNOLOGY”

1. void joystring (string s) - With one string argument that prints the position of the first space and the last space of the given string .

Example s=”cloud computing means internet based computing”

Output: First Index : 5 Last Index : 36

1. void joystring(string S1, string S2) with two string arguments that combines the two strings with the space between them and prints the result.

Example s1=”Keep trying.” s2=”Don't lose hope.”

Output: “Don’t lose hope. Keep trying.” (use library function)

Question 4

write a Java program to accept a sentence as an input from the user and print the frequency of the vowels occurring in each one of the sentence.

Example input: Enter a sentence: “Failures are the pillars of success”

Output: No. of vowels present

failures - 4

are – 2

the - 1

pillar-2

of -1

success – 2

Question 5

Write a menu driven program to perform the following

1. sum

To print the Pronic numbers between 1 and the limit enter by the user

for example if n= 10 output 2, 6, 12, 20,30, 42, 56, 72, 90

Pronic number is a number that is the product of two consecutive integers.

1. Pattern

for example n= 5

output

1

21

321

4321

54321

Note: accept n from the user to perform the above options.

Question 6 :-

Accept numbers in a 2D array of 2 x 2

Print

1. The array in the matrix form

b) sum of i) left diagonal ii) right diagonal

c) Product of each row separately