**Question**

A class ConsChange has been defined with the following details:  
Class name : ConsChange  
Data members/instance variables:  
word : stores the word  
len : stores the length of the word  
Member functions/methods:  
ConsChange( ) : default constructor  
void readword( ) : accepts the word in lowercase  
void shiftcons( ) : shifts all the consonants of the word at the beginning followed by the vowels (e.g. spoon becomes spnoo)  
void changeword( ) : changes the case of all occurring consonants of the shifted word to uppercase, for e.g. (spnoo becomes SPNoo)  
void show( ) : displays the original word, shifted word and the changed word Specify the  
class ConsChange giving the details of the constructor(),void readword( ), void shiftcons( ), void changeword( ) and void show( ). Define the main( ) function to create an object and call the functions accordingly to enable the task.

**Algorithm**

1.Define a class `ConsChange` with the following instance variables:

- `word`: a String to store the input word.

- `len`: an integer to store the length of the word.

- `sc`: a static Scanner object to read input from the user.

2. Define a default constructor for the class `ConsChange`:

- Initialize `len` to 0.

- Initialize `word` to an empty String.

3.Define a method `readword()` to read a word from the user:

- Print "Enter word in Lower case".

- Read the word using the Scanner object and store it in `word`.

- Set `len` to the length of the word.

4. Define a method `shiftcons()` to shift consonants to the front:

- Initialize an empty String `s`.

- Loop through each character in `word`.

- If the character is not a vowel, append it to `s`.

- Loop through each character in `word` again.

- If the character is a vowel, append it to `s`.

- Print the sorted word.

- Set `word` to `s`.

5.Define a method `changeword()` to change consonants to uppercase:

- Initialize an empty String `s`.

- Loop through each character in `word`.

- If the character is not a vowel, convert it to uppercase and append it to `s`.

- If the character is a vowel, append it to `s`.

- Print the changed word.

6.Define a method `show()` to display the original and modified words:

- Print the original word.

- Call `shiftcons()` to shift consonants.

- Call `changeword()` to change consonants to uppercase.

7. Define a static method `main()` to execute the program:

- Create an object of the class `ConsChange`.

- Call `readword()` to read the word from the user.

- Call `show()` to display the original and modified words.

**Variable Description**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Data type** | **Purpose** |
| word | String | To store the word inputed by the user |
| len | int | To store the length of the word |
| s | String | To store the new word |
| c | char | To store individual characters |