Question:

A Emrip is a number which is prime backwards and forward

Design a class Emrip to check if a given number is Emrip number or not some of the member of the class are given below:

Data members:

n: to store the number

rev: store the reverse of the number

1. store the divisor Member method:

Emrip (int nn): to assign n=nn,rev=0 and f=2.

Int isprime(int x): check the number is prime using the recursive technique and return 1 if it is prime other wise 0.

Void isEmrip(): reverse the given number and check if both the original no and the reverse number are prime by invoking isPrime(int)& display the result with an appropriate message.

Specify the class Emrip giving details of the constructor(int), int isprime(int) and void isEmrip(). Define the main() fuction to create an object & call the methods to check for emrip number.

**Algorithm:**

1. **Start**
2. Define a class Emrip with three instance variables n, rev, and f.
3. Define a constructor for the class that takes an integer nn as input. Set n to nn, rev to 0, and f to 2.
4. Define a method isPrime that takes an integer x as input:
   * 1. If x is less than or equal to 1, return 0.
     2. If x is less than or equal to 3, return 1.
     3. If x is divisible by 2 or 3, return 0.
     4. Initialize i to 5. While i squared is less than or equal to x, if x is divisible by i or i+2, return 0. Otherwise, increment i by 6.
     5. If none of the above conditions are met, return 1.
5. Define a method isEmrip:
   * 1. Initialize temp to n. While temp is not 0, calculate the last digit of temp, add it to rev after shifting rev one place to the left, and remove the last digit from temp.
     2. If n and rev are both prime (as determined by the isPrime method), print that n is an Emrip number.
     3. Otherwise, print that n is not an Emrip number.
6. In the main method:
   * 1. Create a Scanner object sc.
     2. Prompt the user to enter a number.
     3. Read an integer x from the user.
     4. Create an Emrip object obj with x.
     5. Call the isEmrip method of obj.
     6. Close the scanner.
7. **End**

**Variable Description Table**

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| --- | --- | --- |
| **Variable Name** | **Variable Type** | **Variable Description** |
| n | Integer | The number input by the user. |
| rev | Integer | The reversed number. |
| f | Integer | The divisor, initialized to 2. |
| x | Integer | The number input by the user in the main method. |
| obj | Emrip | An instance of the Emrip class. |
| sc | Scanner | A Scanner object used to read input from the user. |