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Batch: Greenfield Training Batch 31

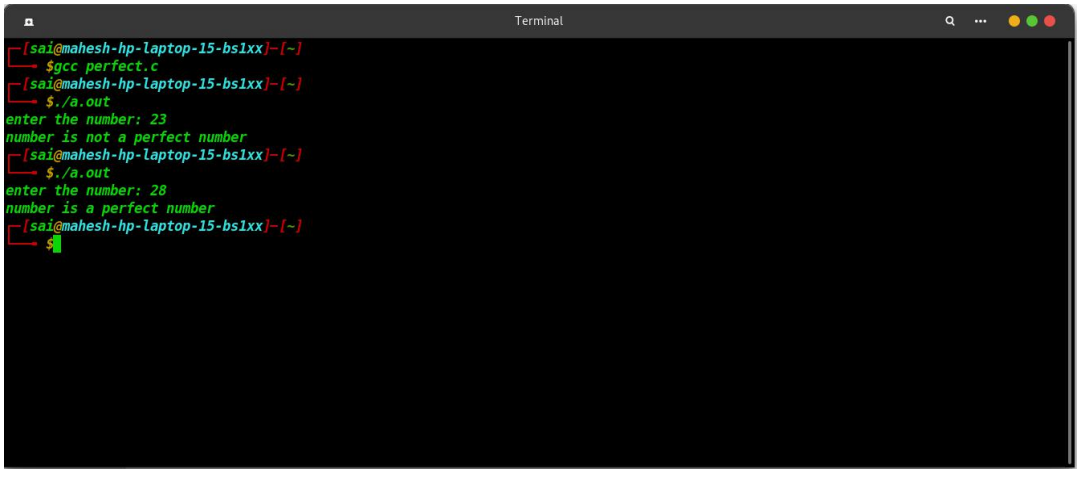
C PROGRAMMING -

Title: 1. Program to check weather number is perfect number or not.

Source Code:

```
#include<stdio.h>

void checkPrefect(int num)
{
      int sum=0,i=1;
      while(i<num)
      {
            if(num%i==0)
            {
                  sum+=i;
            }
            i++;
      }
      if(sum==num)
      {
            printf("number is a perfect number \n");
      }
      else
      {
      printf("number is not a perfect number \n");
      }
}

void main()
{
  int num;
  printf("enter the number: ");
  scanf("%d",&num);
  checkPrefect(num);


}
```

Output:

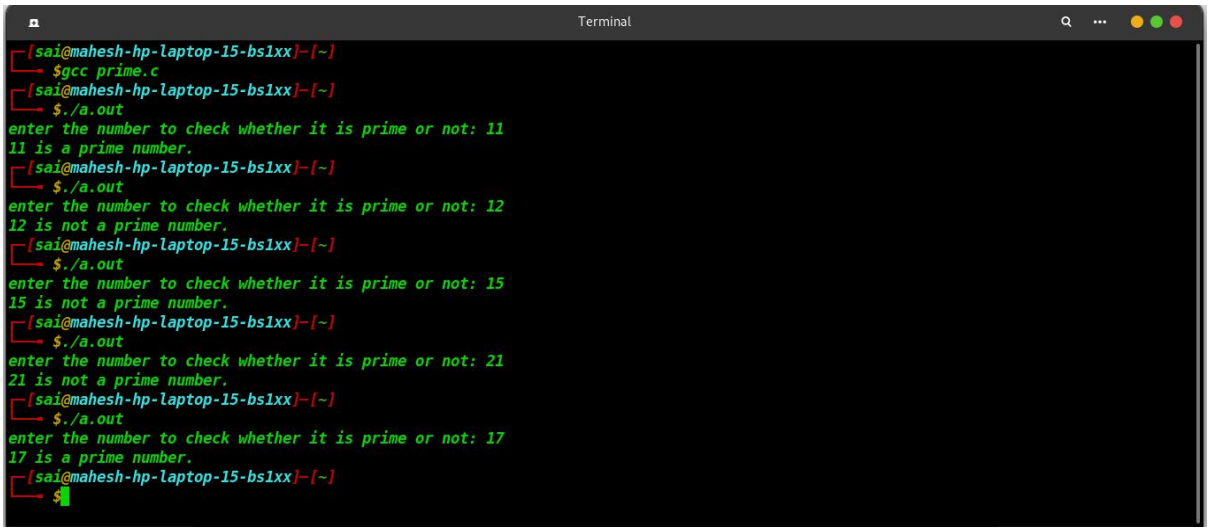


Title: 2. Program to check weather number is Prime number or not.

Source Code:

```
#include<stdio.h>
void checkPrime(int n)
{
      int i=2;
      if(n==1)
       {
            printf("%d is not a prime number.\n",n);
       }
      while(i<=n)
      {

           if(n%i==0)
           {
                if(n==i)
                {
                printf("%d is a prime number.\n",n);
                }
                else
                {
                     printf("%d is not a prime number.\n",n);
                     break;
                }
           }
           i++;
      }
}
void main()
{
  int n;
  printf("enter the number to check whether it is prime or not: ");
  scanf("%d",&n);
  checkPrime(n);
}
```

Output:



Title: 3. Program to check weather number is Armstrong number or not.

Source Code:

```
#include<stdio.h>
void checkArmstrong(int num)
{     int num2=num,i=0,sum=0,mult,value;
```

```
        // to find the no. of digits in a number
        while(num2!=0)
        {
              num2/=10;
              i++;
        }
        //    to find the armstrong value
        num2=num;
        while(num2!=0)
        {
        value= num2%10;
        mult=1;
        for(int j=1;j<=i;j++)
        {
              mult*=value;
        }
        sum+=mult;
        num2/=10;
        }
        //    to check the armstrong or not
        if(sum==num)
        {
              printf("the number is armstrong number\n");
        }
        else
        {
              printf("the number is not an armstrong number\n");
        }
  }
  void main()
  {
    int num;
    printf("enter the number: ");
    scanf("%d",&num);
    checkArmstrong(num);


  }
```

Output:

Title: 4. Program to print febonici series upto n numbers.

Source Code:

```
#include<stdio.h>
```

```
void printFibonacii(int num)
{
	int i=0,j=1,k;
	if(num>0)
	{
	printf("%d\t",0);
	}
	while(num>1)
	{
		k=i;
		i=i+j;
		printf("%d\t",i);
		j=k;
		num--;

	}
	printf("\n");
}
void main()
{
  int num;
  printf("enter the number: ");
  scanf("%d",&num);
  printFibonacii(num);
}
```

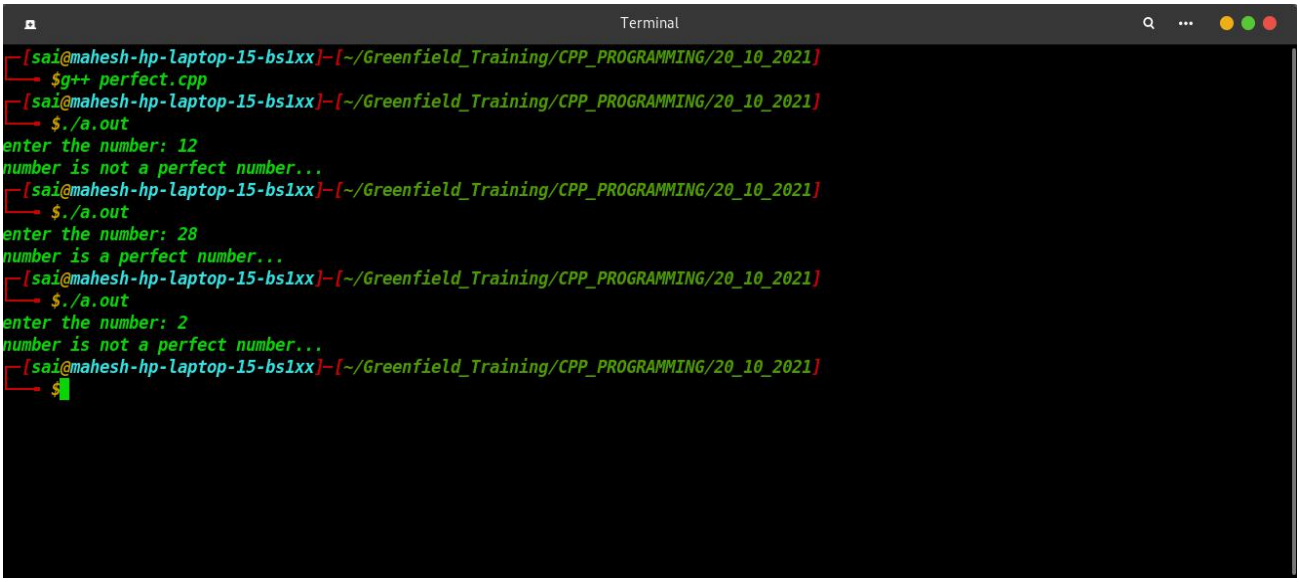
Output:

Title: 1. Program to check weather number is perfect number or not.

Source Code:

```
#include<iostream>
using namespace std;

bool checkPrefect(int num)
{
	int sum=0,i=1;
	while(i<num)
	{
		if(num%i==0)
		{
			sum+=i;
		}
		i++;
	}
	if(sum==num)
	{
	    return true;
	}
	else
	{
		return false;
	}
}

int main()
{
	int num;
	cout<<"enter the number: ";
	cin>>num;
	if(checkPrefect(num))
	{
		cout<<"number is a perfect number..."<<endl;
	}
	else
	{
	     cout<<"number is not a perfect number..."<<endl;
	}
	return 0;
}
```

Output:

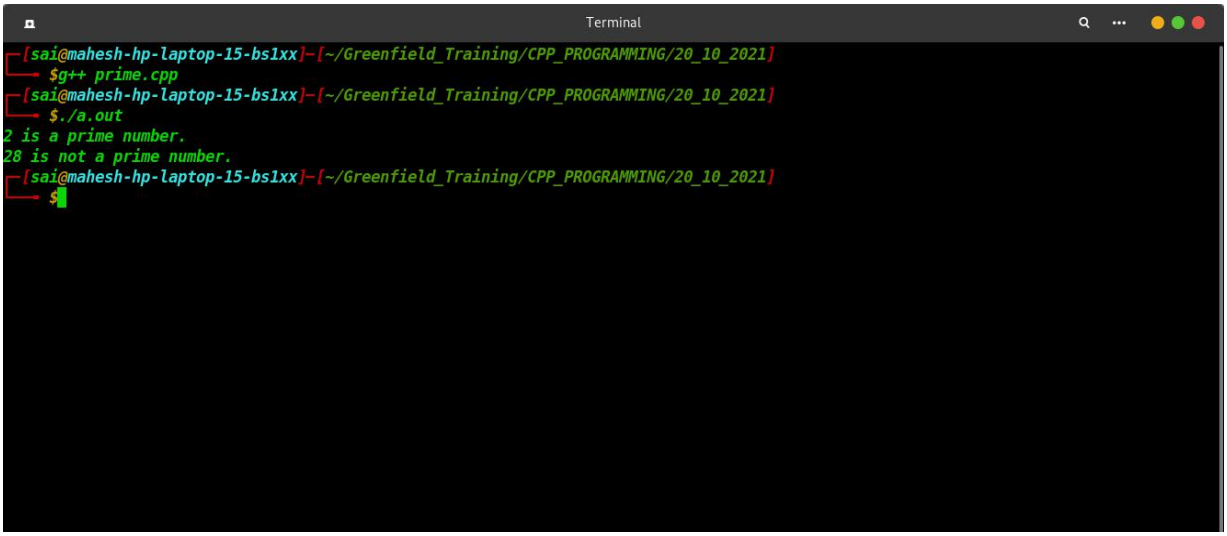


Title: 2. Program to check weather number is Prime number or not.

Source Code:

```
#include<iostream>
using namespace std;

class Prime
{
    int num;
public:
    Prime(int num)
    {
        this->num = num;
    }
    void checkPrime()
    {
        int i=2;
        if(this->num==1)
        {
            printf("%d is not a prime number.\n",this->num);
        }
        while(i<=this->num)
        {

            if(this->num%i==0)
            {
                if(this->num==i)
                {
                printf("%d is a prime number.\n",this->num);
                }
                else
                {
                    printf("%d is not a prime number.\n",this->num);
                    break;
                }
            }
            i++;
        }
    }
};

int main()
{
    Prime p(2);
    Prime q(28);
    p.checkPrime();
    q.checkPrime();

    return 0;
}
```

Output:



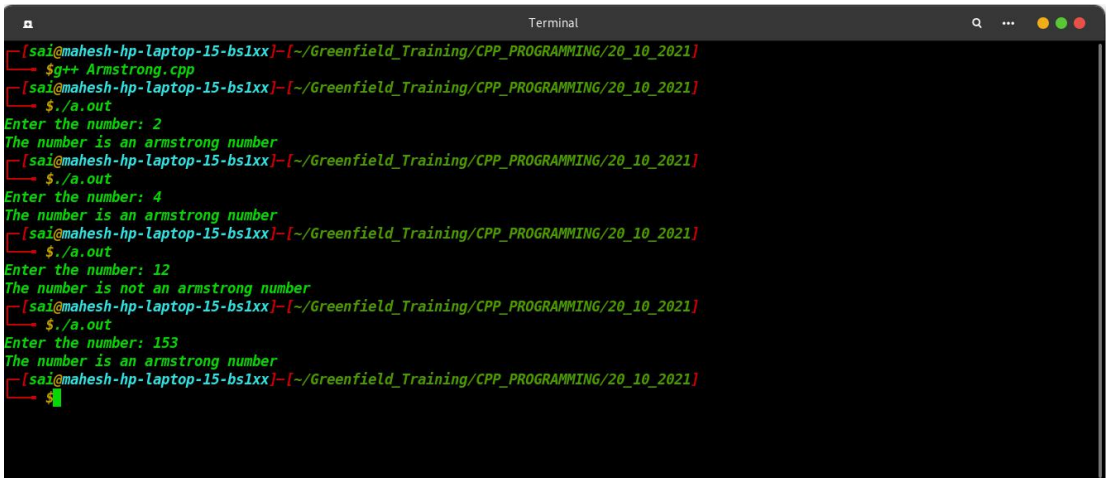
Title: 3. Program to check weather number is Armstrong number or not.

Source Code:

```
#include<iostream>
using namespace std;


bool checkArmstrong(int num)
{    int num2=num,i=0,sum=0,mult,value;
     // to find the no. of digits in a number
     while(num2!=0)
     {
          num2/=10;
          i++;
     }
     //   to find the armstrong value
     num2=num;
     while(num2!=0)
     {
     value= num2%10;
     mult=1;
     for(int j=1;j<=i;j++)
     {
          mult*=value;
     }
     sum+=mult;
     num2/=10;
     }
     //   to check the armstrong or not
     if(sum==num)
     {
          return true;
     }
     else
     {
          return false;
     }
}

int main()
{
     int num;
     printf("Enter the number: ");
     cin>>num;
     if(checkArmstrong(num))
     {
```

```
            cout<<"The number is an armstrong number"<<endl;
        }
        else
        {
            cout<<"The number is not an armstrong number"<<endl;
        }
        return 0;
    }
```

Output:

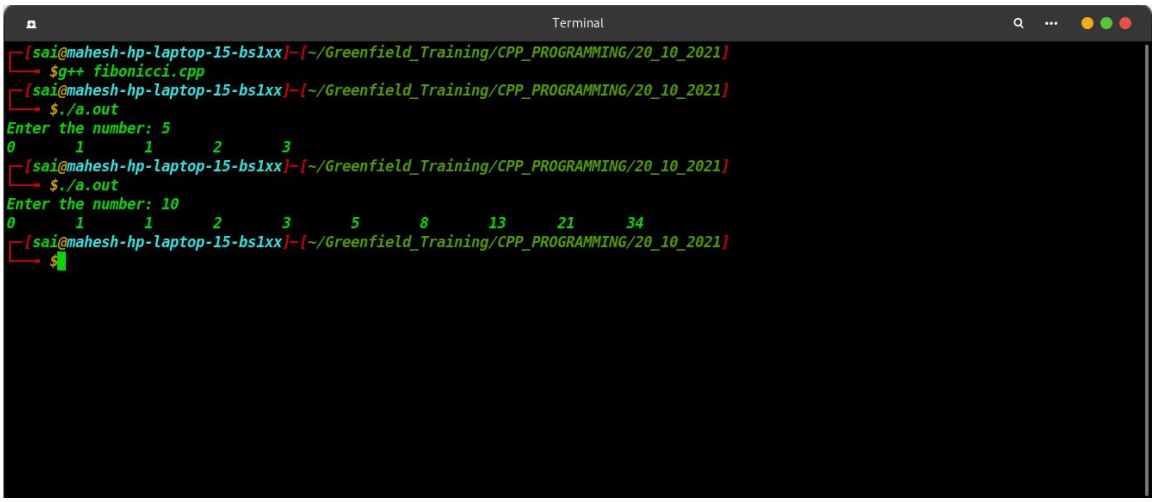


Title: 4. Program to print febonici series upto n numbers.

Source Code:

```
    #include<iostream>

    void printFibonacii(int num)
    {
        int i=0,j=1,k;
        if(num>0)
        {
        std::cout<<0<<"\t";
        }
        while(num>1)
        {
            k=i;
            i=i+j;
            std::cout<<i<<"\t";
            j=k;
            num--;

        }
        std::cout<<std::endl;
    }
    int main()
    {
      int num;
      std::cout<<"Enter the number: ";
      std::cin>>num;
      printFibonacii(num);
    }
```

Output:

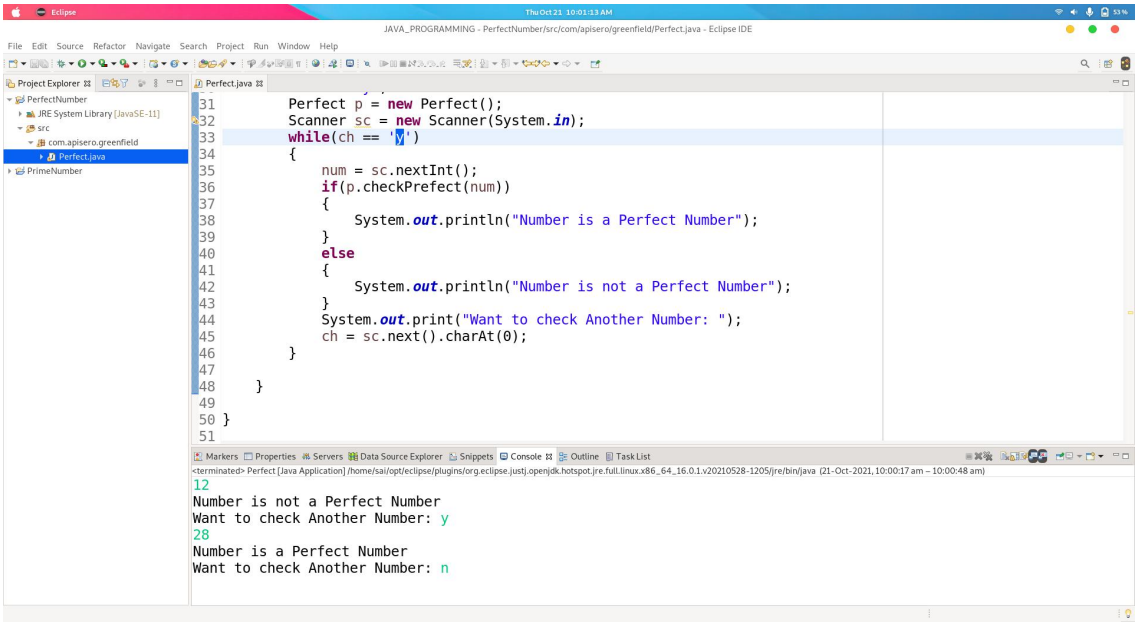

Terminal
[sai@mahesh-hp-laptop-15-bs1xx]-[~/Greenfield_Training/CPP_PROGRAMMING/20_10_2021]
$g++ fibonicci.cpp
[sai@mahesh-hp-laptop-15-bs1xx]-[~/Greenfield_Training/CPP_PROGRAMMING/20_10_2021]
$./a.out
Enter the number: 5
0 1 1 2 3
[sai@mahesh-hp-laptop-15-bs1xx]-[~/Greenfield_Training/CPP_PROGRAMMING/20_10_2021]
$./a.out
Enter the number: 10
0 1 1 2 3 5 8 13 21 34
[sai@mahesh-hp-laptop-15-bs1xx]-[~/Greenfield_Training/CPP_PROGRAMMING/20_10_2021]
$

Title: 1. Program to check weather number is perfect number or not.

Source Code:

```
package com.apisero.greenfield;
import java.util.Scanner;

public class Perfect
{
	boolean checkPrefect(int num)
	{
		int sum=0,i=1;
		while(i<num)
		{
			if(num%i==0)
			{
				sum+=i;
			}
			i++;
		}
		if(sum==num)
		{
		    return true;
		}
		else
		{
			return false;
		}
	}

	public static void main(String[] args)
	{
		int num;
		char ch='y';
		Perfect p = new Perfect();
		Scanner sc = new Scanner(System.in);
		while(ch == 'y')
		{
			num = sc.nextInt();
			if(p.checkPrefect(num))
			{
				System.out.println("Number is a Perfect Number");
			}
			else
			{
				System.out.println("Number is not a Perfect Number");
			}
			System.out.print("Want to check Another Number: ");
			ch = sc.next().charAt(0);
		}

	}

	}
```

Output:

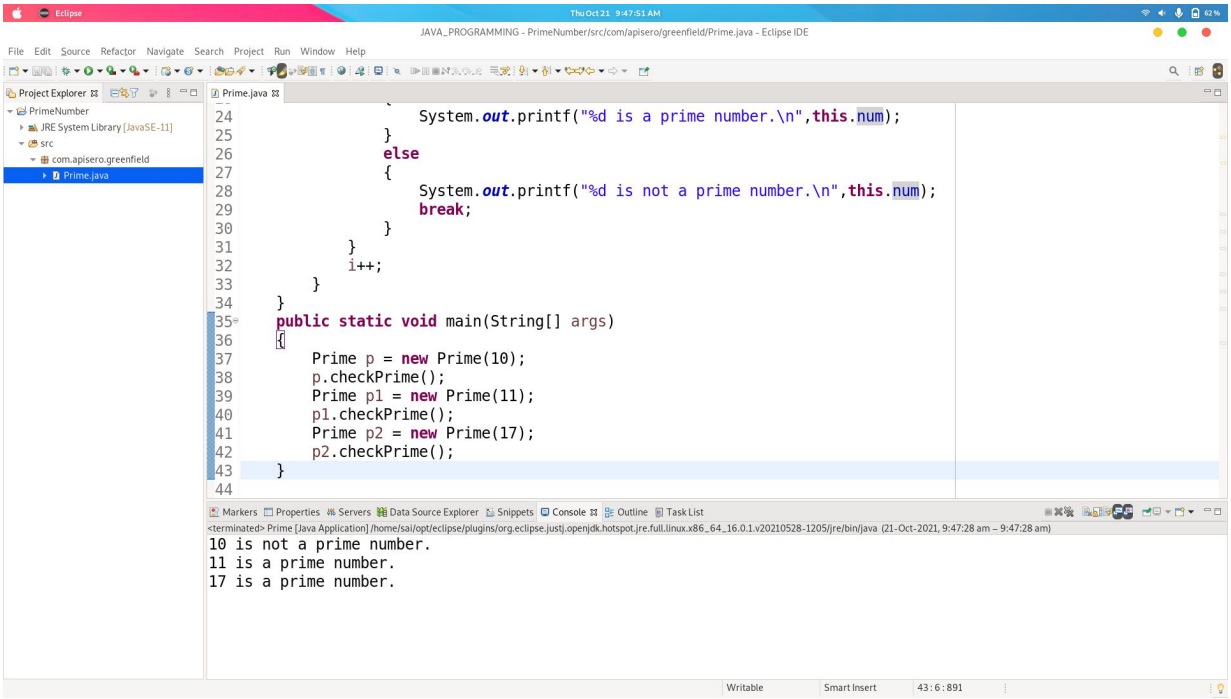


Title: 2. Program to check weather number is Prime number or not.

Source Code:

```
package com.apisero.greenfield;

public class Prime
{
	int num;
	Prime(int num)
	{
		this.num = num;
	}
	void checkPrime()
	{
		int i=2;
		if(this.num==1)
		{
			System.out.printf("%d is not a prime number.\n",this.num);
		}
		while(i<=this.num)
		{

			if(this.num%i==0)
			{
				if(this.num==i)
				{
				 System.out.printf("%d is a prime number.\n",this.num);
				}
				else
				{
				 System.out.printf("%d is not a prime number.\n",this.num);
					break;
				}
			}
			i++;
		}
	}
	public static void main(String[] args)
	{
		Prime p = new Prime(10);
		p.checkPrime();
		Prime p1 = new Prime(11);
		p1.checkPrime();
		Prime p2 = new Prime(17);
		p2.checkPrime();
		}
```

Output:



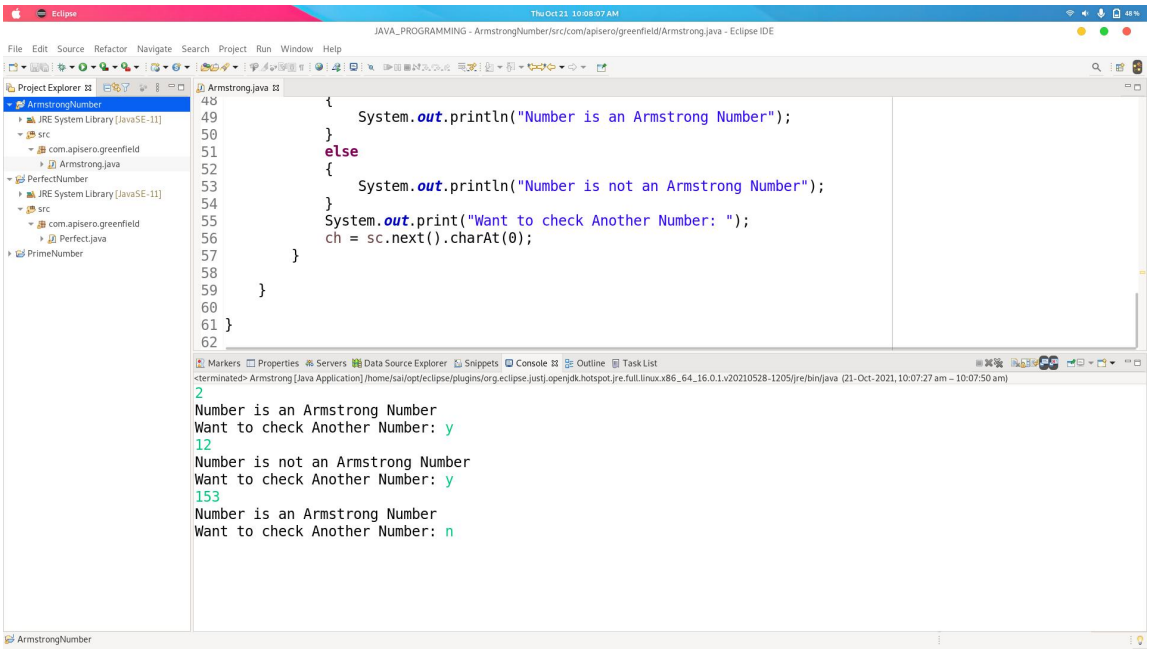
Title: 3. Program to check weather number is Armstrong number or not.

Source Code:

```
package com.apisero.greenfield;
import java.util.Scanner;

public class Armstrong
{
	boolean checkArmstrong(int num)
	{	int num2=num,i=0,sum=0,mult,value;
		// to find the no. of digits in a number
		while(num2!=0)
		{
			num2/=10;
			i++;
		}
		//	to find the armstrong value
		num2=num;
		while(num2!=0)
		{
		value= num2%10;
		mult=1;
		for(int j=1;j<=i;j++)
		{
			mult*=value;
		}
		sum+=mult;
		num2/=10;
		}
		//	to check the armstrong or not
		if(sum==num)
		{
			return true;
		}
		else
		{
			return false;
		}
```

```
    }

    public static void main(String[] args)
    {
        int num;
        char ch='y';
        Armstrong p = new Armstrong();
        Scanner sc = new Scanner(System.in);
        while(ch == 'y')
        {
            num = sc.nextInt();
            if(p.checkArmstrong(num))
            {
                System.out.println("Number is an Armstrong Number");
            }
            else
            {
                System.out.println("Number is not an Armstrong Number");
            }
            System.out.print("Want to check Another Number: ");
            ch = sc.next().charAt(0);
        }

    }

}
```

Output:



Title: 4. Program to print febonici series upto n numbers.

Source Code:

```
package com.apisero.greenfield;

import java.util.Scanner;

public class Fibonacii
{
    void printFibonacii(int num)
    {
        int i=0,j=1,k;
```

```
            if(num>0)
            {
            System.out.print(0+"\t");
            }
            while(num>1)
            {
                  k=i;
                  i=i+j;
                  System.out.print(i+"\t");
                  j=k;
                  num--;

            }
            System.out.println();
      }

      public static void main(String[] args)
      {
            int num;
            char ch='y';
            Fibonacii p = new Fibonacii();
            Scanner sc = new Scanner(System.in);
            while(ch == 'y')
            {
                  num = sc.nextInt();
                  p.printFibonacii(num);
                  System.out.print("Want to check Another Number: ");
                  ch = sc.next().charAt(0);
            }

      }
}
```

Output: