**BCD CONVERTER USING WRAPPER CLASS IN JAVA**

**INTRODUCTION -**

**BCD** = Binary Coded Decimal

BCD Converter is used to convert one type of number system into another.

Eg., Decimal to Binary or Binary to Decimal, etc.

**IMPLEMENTATION -**

In this, the program takes multiple parameters as inputs and performs the operations on them.

Following are the functionalities of the project -

1. Binary to Decimal
2. Binary to Hexadecimal
3. Decimal to Binary
4. Hexadecimal to Binary
5. Decimal to Hexadecimal
6. Hexadecimal to Decimal

To build this program switch case and while loop are used.

**PROGRAM -**

**/\* BCD Converter made by Supriya Bauddh (NIT Delhi) \*/**

**import java.util.\*;**

**public class Main**

**{**

**public static void main(String[] args) {**

**Scanner sc = new Scanner(System.in);**

**Main obj = new Main();**

**int ch, num, res, i = 1;**

**double dnum, dres;**

**String snum , sres;**

**//this loop is used to iterate the menu items after every successful operation**

**while (i == 1) {**

**//Menu Items**

**System.out.println("Enter Input ");**

**System.out.println("1) Binary to Decimal ");**

**System.out.println("2) Binary to Hexadecimal ");**

**System.out.println("3) Decimal to Binary ");**

**System.out.println("4) Hexadecimal to Binary ");**

**System.out.println("5) Decimal to Hexadecimal ");**

**System.out.println("6) Hexadecimal to Decimal ");**

**System.out.println("7) Exit");**

**ch = sc.nextInt();**

**//Switch Case to perform desired operation**

**switch (ch) {**

**case 1:**

**System.out.println("Enter Binary Number");**

**snum= sc.next();**

**res = Integer.parseInt(snum, 2);**

**System.out.println("Decimal Number=" + res+"\n");**

**break;**

**case 2:**

**System.out.println("Enter Binary Number");**

**snum= sc.next();**

**int z= Integer.parseInt(snum, 2);**

**sres=Integer.toHexString(z);**

**System.out.println("Hexadecimal Number=" + sres +"\n");**

**break;**

**case 3:**

**System.out.println("Enter Decimal Number");**

**num = sc.nextInt();**

**sres = Integer.toBinaryString(num);**

**System.out.println("Binary Number=" + sres);**

**break;**

**case 4:**

**System.out.println("Enter Hexadecimal Number");**

**String hex= sc.next();**

**num=Integer.parseInt(hex,16);**

**sres = Integer.toBinaryString(num);**

**System.out.println("Binary Number=" + sres);**

**break;**

**case 5:**

**System.out.println("Enter Decimal Number");**

**num = sc.nextInt();**

**sres=Integer.toHexString(num);**

**System.out.println("Hexadecimal Number=" + sres);**

**break;**

**case 6:**

**System.out.println("Enter Hexadecimal Number");**

**String hexa= sc.next();**

**num=Integer.parseInt(hexa,16);**

**System.out.println(" Decimal Number=" + num);**

**break;**

**case 7:**

**System.out.println("Thank you");**

**i = -1;**

**break;**

**default:**

**System.out.println("Invalid Input");**

**break;**

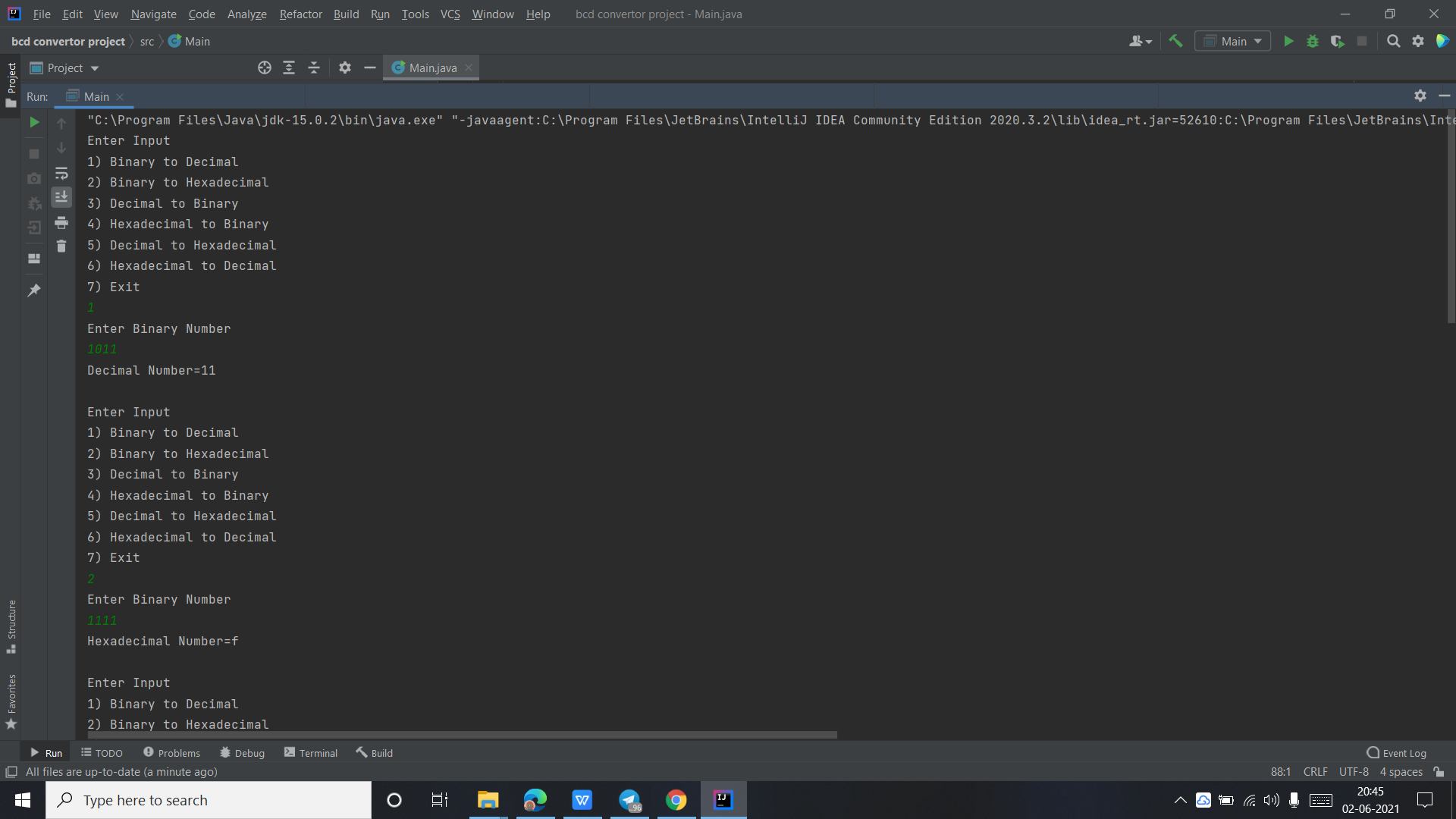
**}**

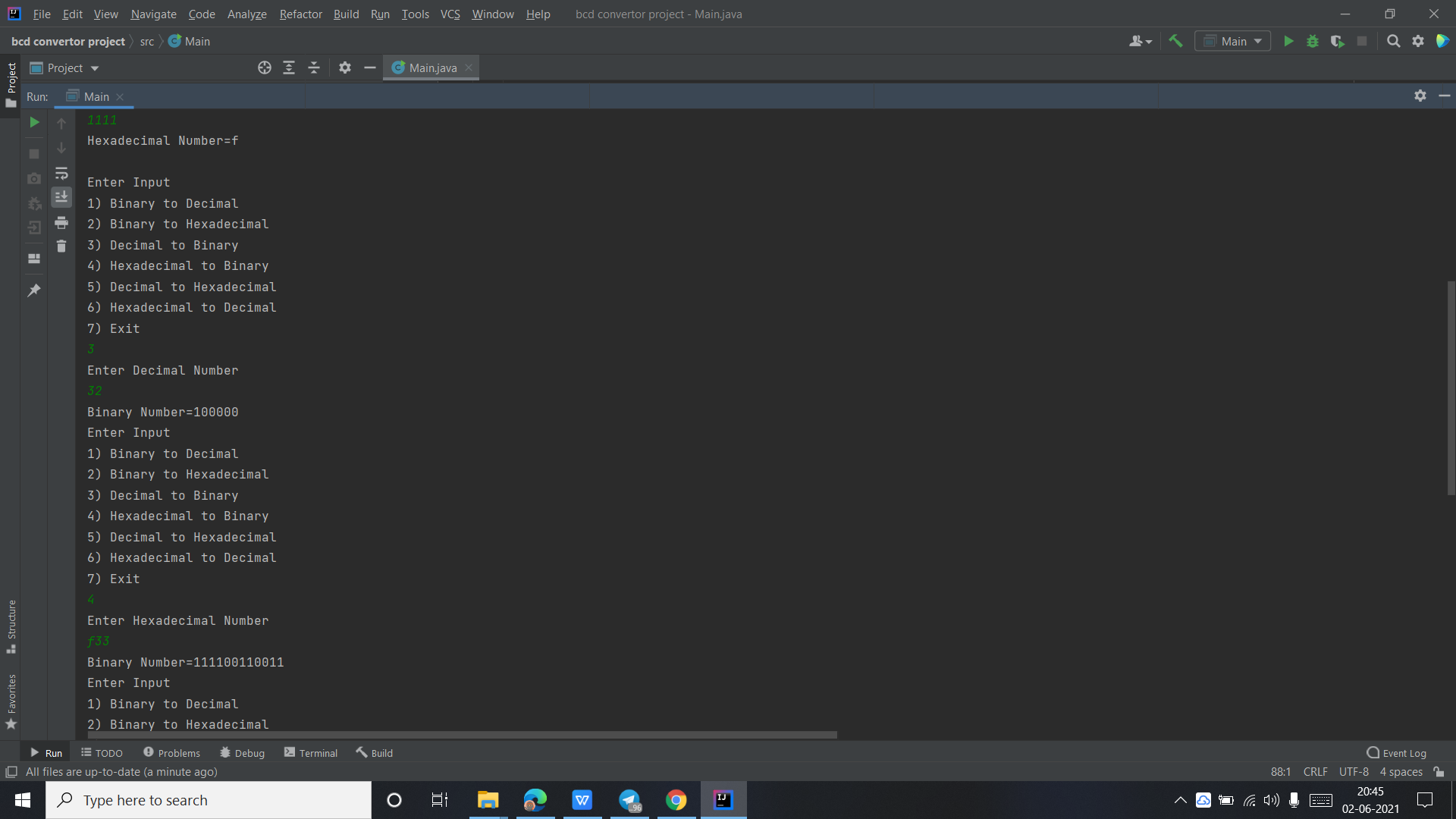
**}**

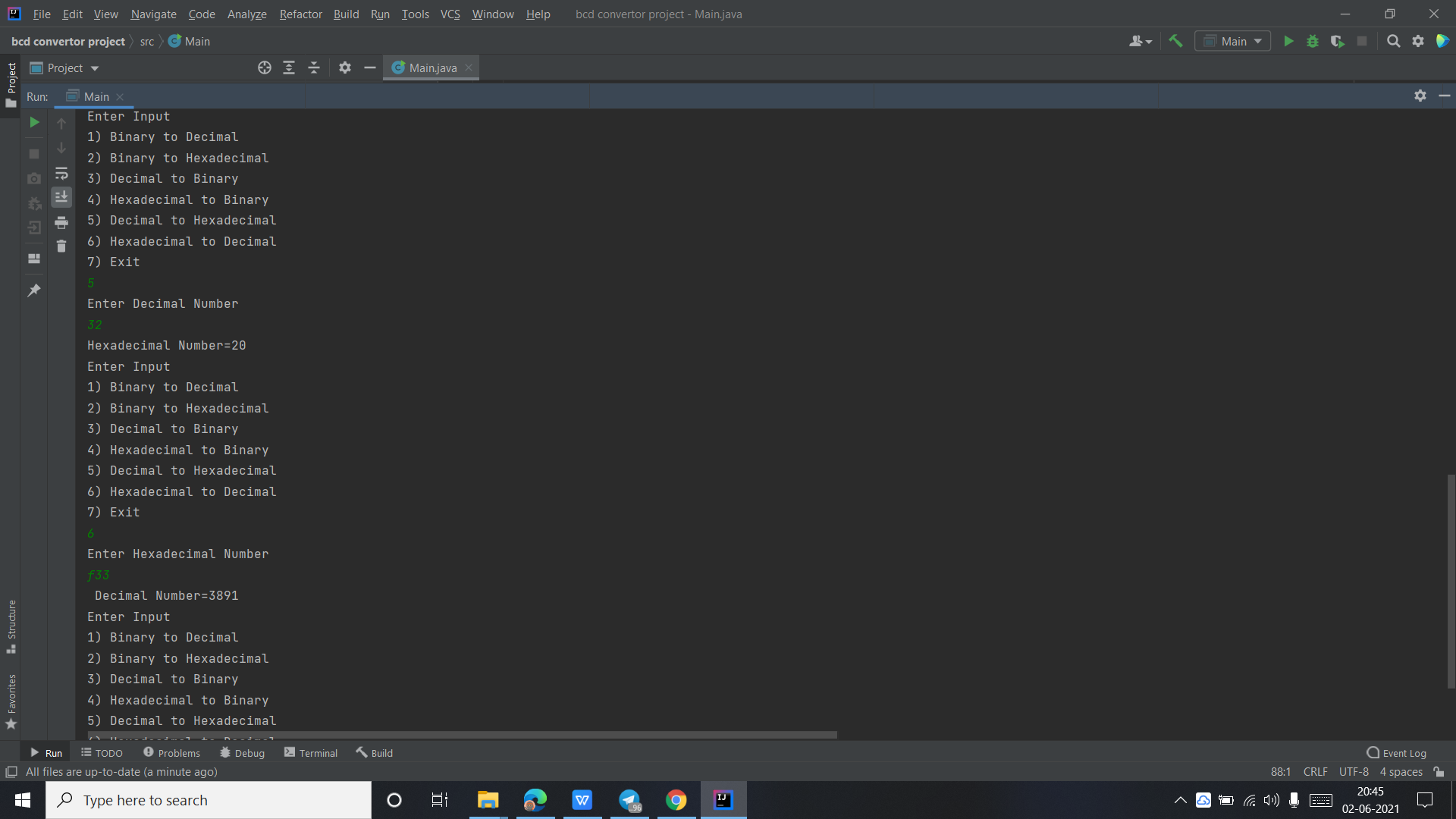
**}**

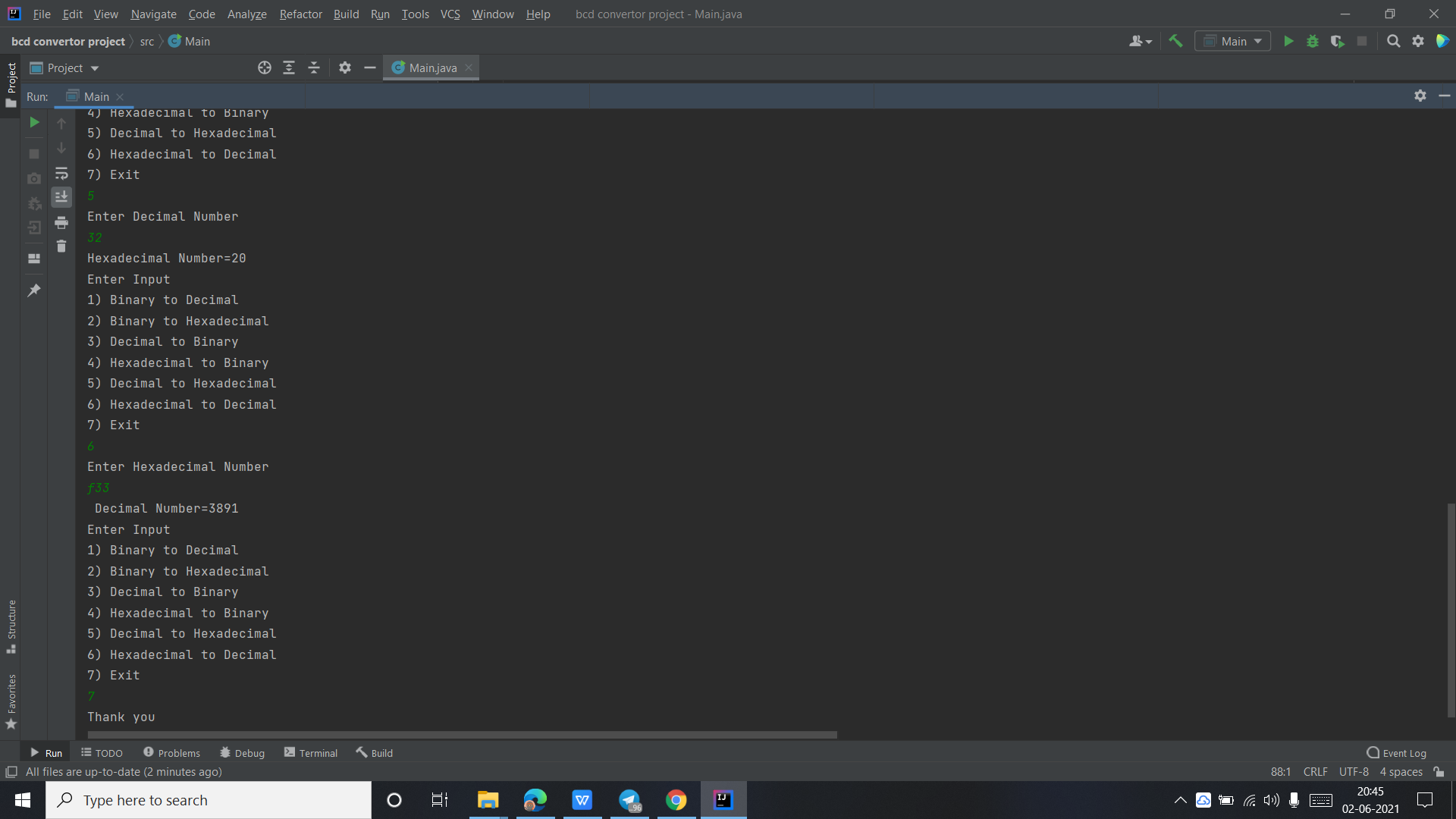
**}**

**OUTPUT:**

****

****





****Explanation:****Here, we have used the Wrapper class to convert .

* ****choice**** - specifies the operation to be performed
* ****number****- operands to perform an operation on

Here, we performed various conversion .

By using this Converter program we can perform multiple conversions at once. After completion, we can exit with the exit operation.

And this is all about the BCD Converter using Wrapper class in JAVA