BIRAT KSHITIZ COLLEGE

T.U. AFFILIATE

Estd : 2069 B.S.

ASSIGNMENT

Batch: 2081

01

By : BISHWAJYOTI RAJBANSHI

Summitted to : Aayush Lamsal

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Faculty: BS.C CSIT

Subject: Object Oriented Programming

```cpp
// 1.Program for calculating area and perimeter of a rectangle by user input data using concept of class and object
#include <iostream>
using namespace std;

class Rectangle {
    public:
    float length, breadth;

    void input() {
        cout << "Enter length and breadth of rectangle: ";
        cin >> length >> breadth;
    }

    void areaPerimeter() {
        float area = length * breadth;
        float perimeter = 2 * (length + breadth);
        cout << "Area: " << area << endl;
        cout << "Perimeter: " << perimeter << endl;
    }
};

int main() {
    Rectangle rect;
    rect.input();
    rect.areaPerimeter();

    return 0;
}

// 2. Program to display general information of the student like account no, phone number, roll no using class and object
#include <iostream>
using namespace std;

class Student {
public:
    char name[50];
    int roll;
    long long phone;

    void input() {
        cout << "\nEnter student name: ";
```

```
        cin >> name;
        cout << "Enter roll number: ";
        cin >> roll;
        cout << "Enter phone number: ";
        cin >> phone;
    }

    void display() {
        cout << "\nStudent Info:\n";
        cout << "Name: " << name << endl;
        cout << "Roll No: " << roll << endl;
        cout << "Phone No: " << phone << endl;
    }
};

int main() {
    Student std;
    std.input();
    std.display();

    return 0;
}

// 3. Program to covert Indian currency into Nepali currency using the
concept of class and objects

#include <iostream>
using namespace std;

class CurrencyConverter {
public:
    float INR;
    float Rate = 1.6; // 1 INR = 1.6 NPR

    void input() {
        cout << "\nEnter amount in Indian Rupees: ";
        cin >> INR;
    }

    void convert() {
        float NPR = INR * Rate;
        cout << "The converted mount in Nepali Rupees is : " << NPR <<
endl;
```

```
    }
};

int main() {
    CurrencyConverter currency;
    currency.input();
    currency.convert();

    return 0;
}

// 4. Write a program to check whether the given number is prime or
object using the concept of class and object
#include <iostream>
using namespace std;

class PrimeChecker {
public:
    int num;

    void input() {
        cout << "\nTo check whether the number is prime or not, enter a
number. ";
        cout << "\nEnter a number: ";
        cin >> num;
    }

    void checkPrime() {
        int i, count = 0;

        if (num <= 1) {
            cout << num << " is not a prime number.\n";
            return;
        }

        for (i = 1; i <= num; i++) {
            if (num % i == 0) {
                count++;
            }
        }

        if (count == 2) {
            cout << num << " is a prime number.\n";
```

```
        } else {
            cout << num << " is not a prime number.\n";
        }
    }
};

int main() {
    PrimeChecker prime;
    prime.input();
    prime.checkPrime();

    return 0;
}
```