TECHNO INDIA UNIVERSITY

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Subject: Object Oriented Programming

Question: Write a program to overload the Subscript[] operator

Answer:

```
#include <cstdlib>
#include <iostream>

using namespace std;

// A class to represent an integer array
class Array {
private:
    int* ptr;
    int size;

public:
    Array(int*, int);

    // Overloading [] operator to access elements in array style
    int& operator[](int);

    // Utility function to print contents
    void print() const;
};

// Implementation of [] operator.  This function must return a
// reference as array element can be put on left side
int& Array::operator[](int index)
{
    if (index >= size) {
        cout << "Array index out of bound, exiting";
        exit(0);
    }
    return ptr[index];
}

// constructor for array class
```

```
Array::Array(int* p = NULL, int s = 0)
{
    size = s;
    ptr = NULL;
    if (s != 0) {
        ptr = new int[s];
        for (int i = 0; i < s; i++)
            ptr[i] = p[i];
    }
}

void Array::print() const
{
    for (int i = 0; i < size; i++)
        cout << ptr[i] << " ";
    cout << endl;
}

// Driver program to test above methods
int main()
{
    int a[] = { 1, 2, 4, 5 };
    Array arr1(a, 4);
    arr1[2] = 6;
    arr1.print();
    arr1[8] = 6;
    return 0;
}
```

OUTPUT

```
PS D:\> g++ -o new new.cpp
Elements after deletion :
PS D:\> g++ -o new new.cpp
PS D:\> ./new
1 2 6 5
Array index out of bound, exiting
PS D:\>
```