

Assignment-4

Yatharth Dangi

June 20, 2024

1 Question-1

The code won't give any error. The reason for it lies in the interpretation of `arr[i]` in C++. It actually means `*(arr+i)`, i.e., dereferencing the value using pointer arithmetic. Since addition is commutative, `*(arr+i)` and `*(i+arr)` are equivalent, and therefore `i[arr]` and `arr[i]` are equivalent.

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

int main() {

    int arr[5] = { 2 , 8 , 18 , 34 , 5 } ;
    rep(i, 5) {
        cout << i[arr] << " ";
    }

    return 0;
}
```

Output: 2 8 18 34 5

2 Question-2

Given Code:

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

int main() {

    int arr[5] = { 2 , 8 , 18 , 34 , 5 } ;
    char ch[6] = "abcde" ;
    cout << arr << endl ;
}
```

```
    cout << ch ;  
  
    return 0;  
}
```

In this code, the address will be printed for the integer array, and the whole array `ch` will be printed in the case of the character array. This differential output is because `cout` treats a character array in the same way as a string, and therefore prints all its elements sequentially until the null character is encountered. Here, the last character of `ch` is the null character, and hence `cout` outputs the 5 characters of `ch` in the same order as they are.