# National University of Computer and Emerging Sciences, Lahore Campus

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| | Course Name: | Programming Fundamentals | Course Code: | CS1002 |
| | Program: | Electrical Engineering | Semester: | Fall 2023 |
| | Duration: | 15 minutes | Total Marks: | 10 |
| | Exam Date: | 7 September 2023 | Weight: | 3.33 |
| | Section: | EE-1A -1 | Page(s): | 2 |
| | Exam Type: | Quiz-1 Solution | CLO # | 1 |

Student Name:_____ Roll No._____ Section:_____

| Instruction/Notes: | 1. Do not forget to write your Name and Roll Numbers. |
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| | 2. Solve on the paper and Return. |

**Question No. 1**                                                        **Marks: 10**

Write a C++ program that will determine if a department store customer has exceeded the credit limit on a charge account. For a customer, the following facts are available: a) Account number (an integer) b) Balance at the beginning of the month c) Total of all items charged by this customer this month d) Total of all credits applied to this customer's account this month e) Allowed credit limit The program should input each of these facts, calculate the new balance (= beginning balance + charges – credits) and determine if the new balance exceeds the customer's credit limit. For those customers whose credit limit is exceeded, the program should display the customer's account number, credit limit, new balance and the message "Credit limit exceeded".

**Sample Run:**
Enter account number: 100
Enter beginning balance: 5394.78
Enter total charges: 1000.00
Enter total credits: 500.00
Enter credit limit: 5500.00

Account: 100
Credit limit: 5500.00
Balance: 5894.78
Credit Limit Exceeded.

**Solution:**

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

int main( )
{
        int accountNumber;
        float begBalance, totalCharges, totalCredits, creditLimit, balance;

        cout<<fixed<<showpoint<<setprecision(2);

        cout<<"Enter account number:";
        cin>>accountNumber;
        cout<<"Enter beginning balance:";
        cin>>begBalance;
```

```cpp
        cout<<"Enter total charges:";
        cin>>totalCharges;
        cout<<"Enter total credits:";
        cin>>totalCredits;
        cout<<"Enter credit limit:";
        cin>>creditLimit;
        cout<<endl;

        balance = begBalance + totalCharges – totalCredits

        cout<<"Account:"<<accountNumber<<endl;
        cout<<Credit limit:"<<creditLimit<<endl;
        cout<<"Balance:"<<balance<<endl;

        if (balance > creditLimit)
                cout<<"Credit Limit Exceeded.";

        return 0;
}
```