



CCIT FTUI
FAKULTAS TEKNIK

PROJECT

“Car Rental System using C++”

Arranged by : Group 4

- | | |
|-------------------------------------|--------------|
| 1. Gafrilatif Aviandi Putra Adnanta | (2120010053) |
| 2. Muhamad Farhan Budiana | (2120010203) |
| 3. Muhammad Zidan Satrio | (2120010105) |

Faculty :

Riza Muhammad Nurman

**Continuing Education Program Center for Computing and
Information Technology**

Faculty of Engineering, University of Indonesia

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PROJECT ON

CAR RENTAL SYSTEM USING C++

Developed by

Name : Gafrilatif Aviandi Putra Adnanta
Muhamad Farhan Budiana
Muhammad Zidan Satrio

Faculty : Riza Muhammad Nurman



CAR RENTAL SYSTEM USING C++

Batch Code	: 2ISA3
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Name of the Coordinator	: Riza Muhammad Nurman
Name of Developer	: Gafrilatif Aviandi Putra Adnanta Muhammd Farhan Budiana Muhammad Zidan Satrio
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CERTIFICATE

This is to certify that this report, titled *CAR RENTAL SYSTEM USING C++*, embodies the original work done by *Gafrilatif Aviandi Putra Adnanta, Muhammd Farhan Budiana, and Muhammad Zidan Satrio* in partial fulfillment of his/her courcerequisite at NIIT.

Coordinator :

Riza Muhammad Nurman

ACKNOWLEDGEMENT

Thank you, the author wishes to God the Almighty for His blessings and grace, we can complete this project task both in the form of presentation and paper in a timely manner.

The author also delivers him gratitude to Mr. Riza Muhammad Nurman faculty and other faculty for all guidance to complete it. Thank you to fellow students who have supported, and also thank you to fellow workers in the education at CCIT FT UI. The Project paper entitled “ Car Rental System using C++ ” the author submits as a requirement for the Project assignment in 2022.

Finally, the authors hope this paper can be useful for all and also gain a better insight into the operating system. The author realizes that it is still imperfect. Therefore, the authors really expect all suggestions and criticisms from readers who are constructive in order for the perfection of this paper. Hopefully, this paper can provide many benefits for the readers.

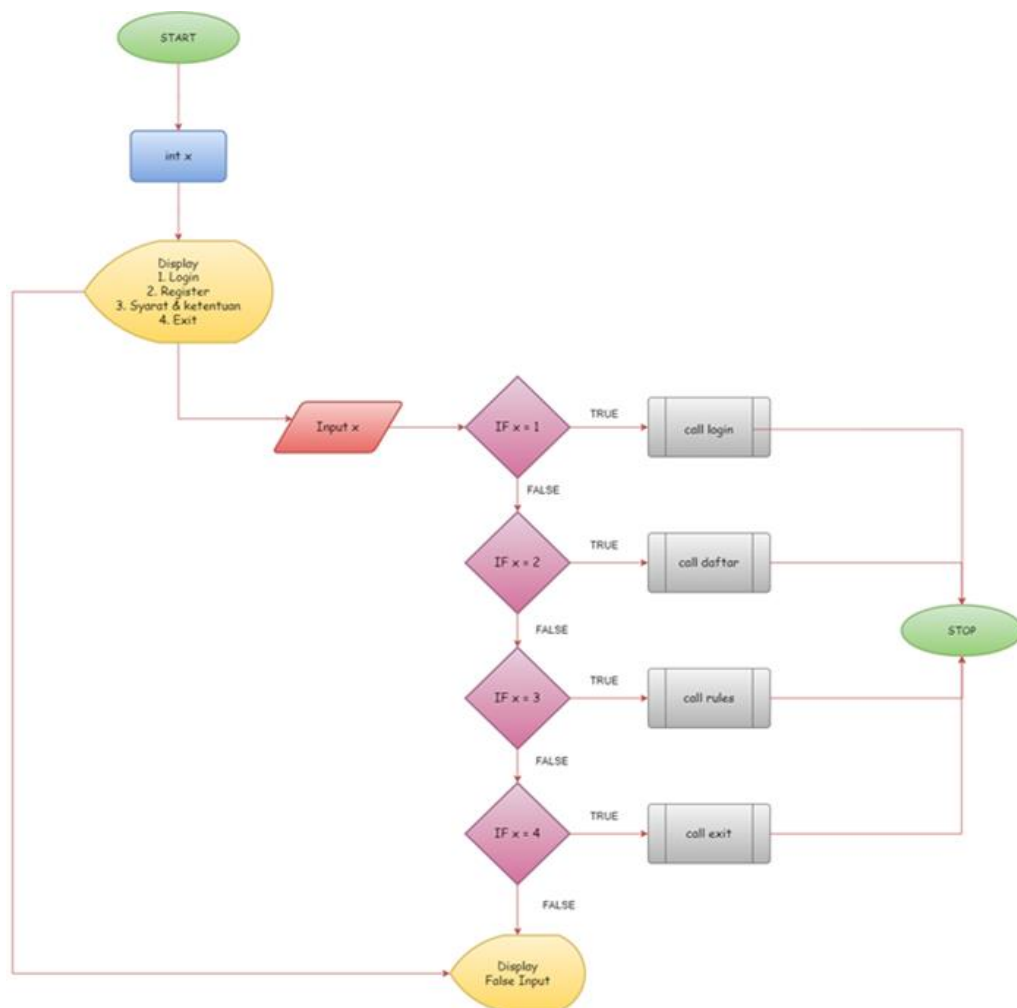
SYSTEM ANALYSIS

The development of existing programming methods is growing so rapidly, it is marked by the many new programming methods aimed at making it easier for programmers to do programming and various purposes. because the development of the program is getting faster, there are many system changes where many fields have been digitized, coupled with the covid-19 pandemic, making everything turn online and programmed.

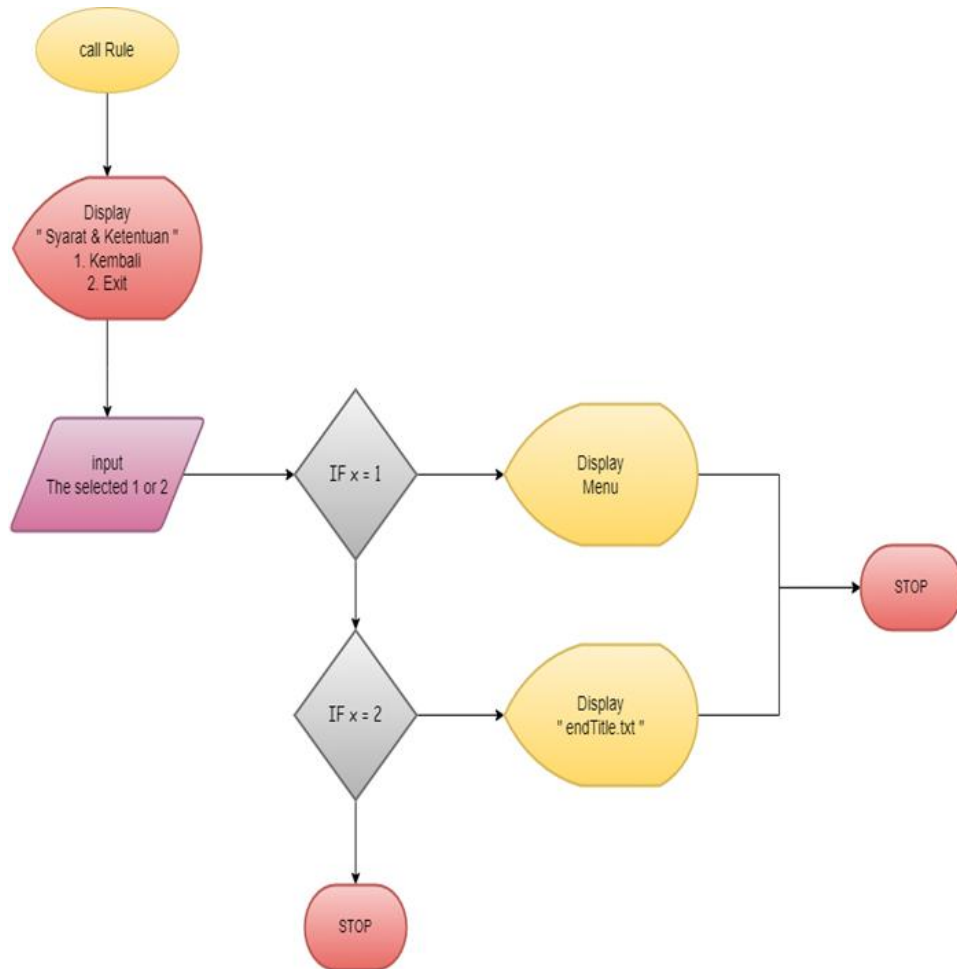
This problem will not been resolved until everything is digitized in order to compete and survive in this era of development. One example is the problem of public services in car rental and other fields. In order to speed up service and maintain health protocols where we are required to change our service system to be completely digital

Therefore, we created a simple program based on object oriented programming about a car rental system as an example of a solution so that people can survive and compete in today's conditions where everything is connected to each other by the internet. In this project we created a car rental system using C++ language, and we created a simple menu where customers can rent a car easily just by going through this program without having to meet face to face.

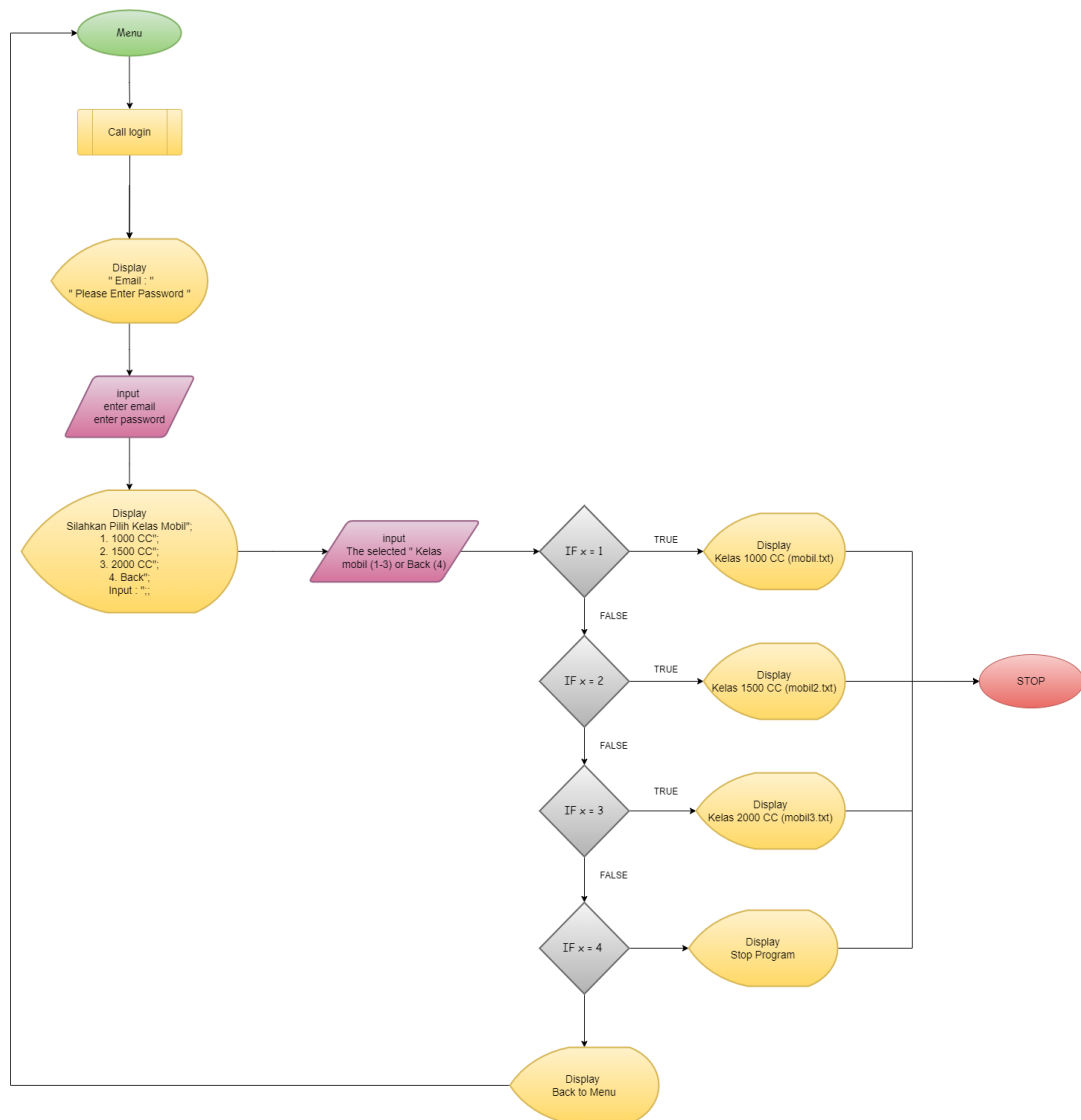
FLOWCHART MAIN MENU



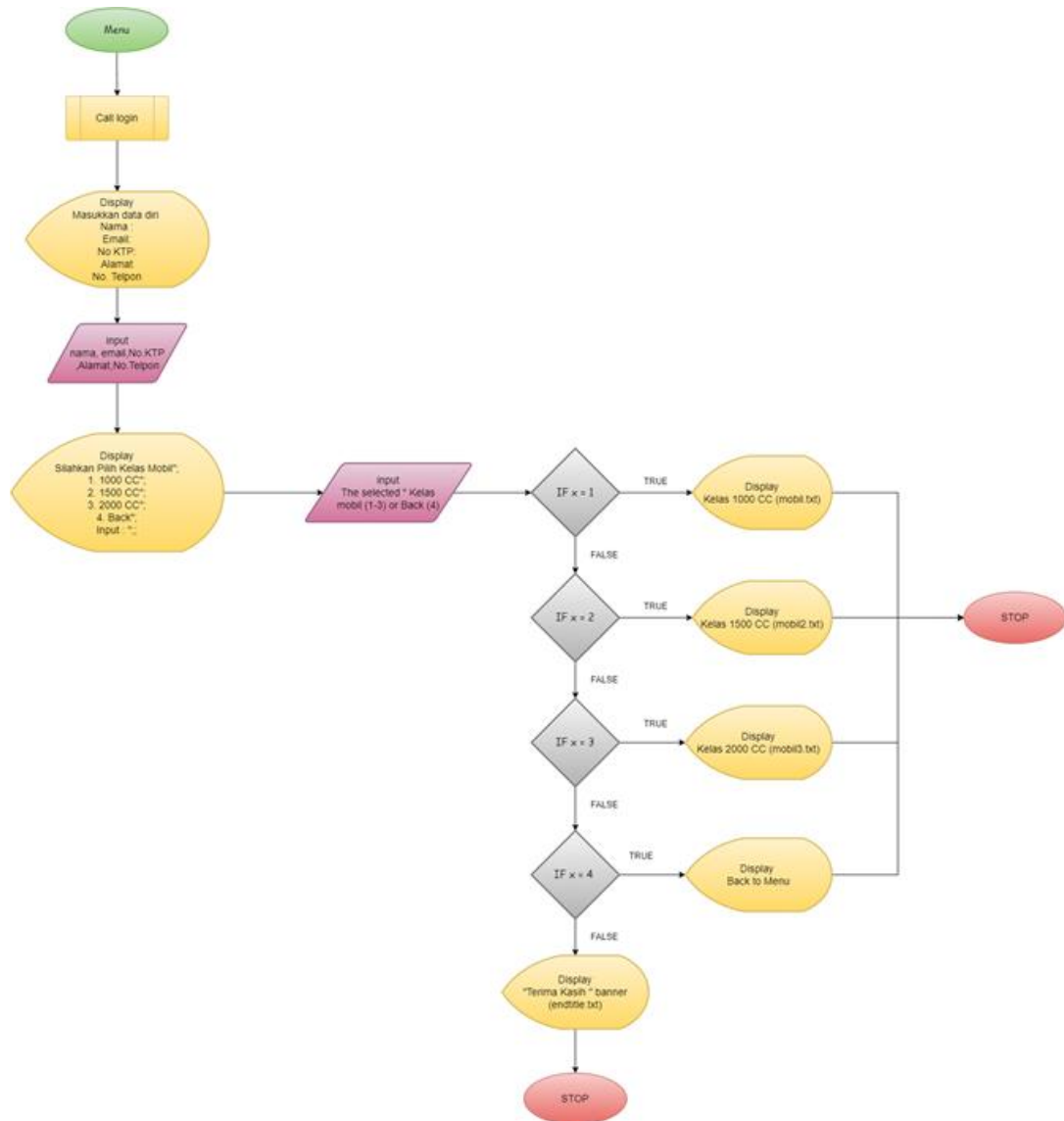
FLOWCHART RULES



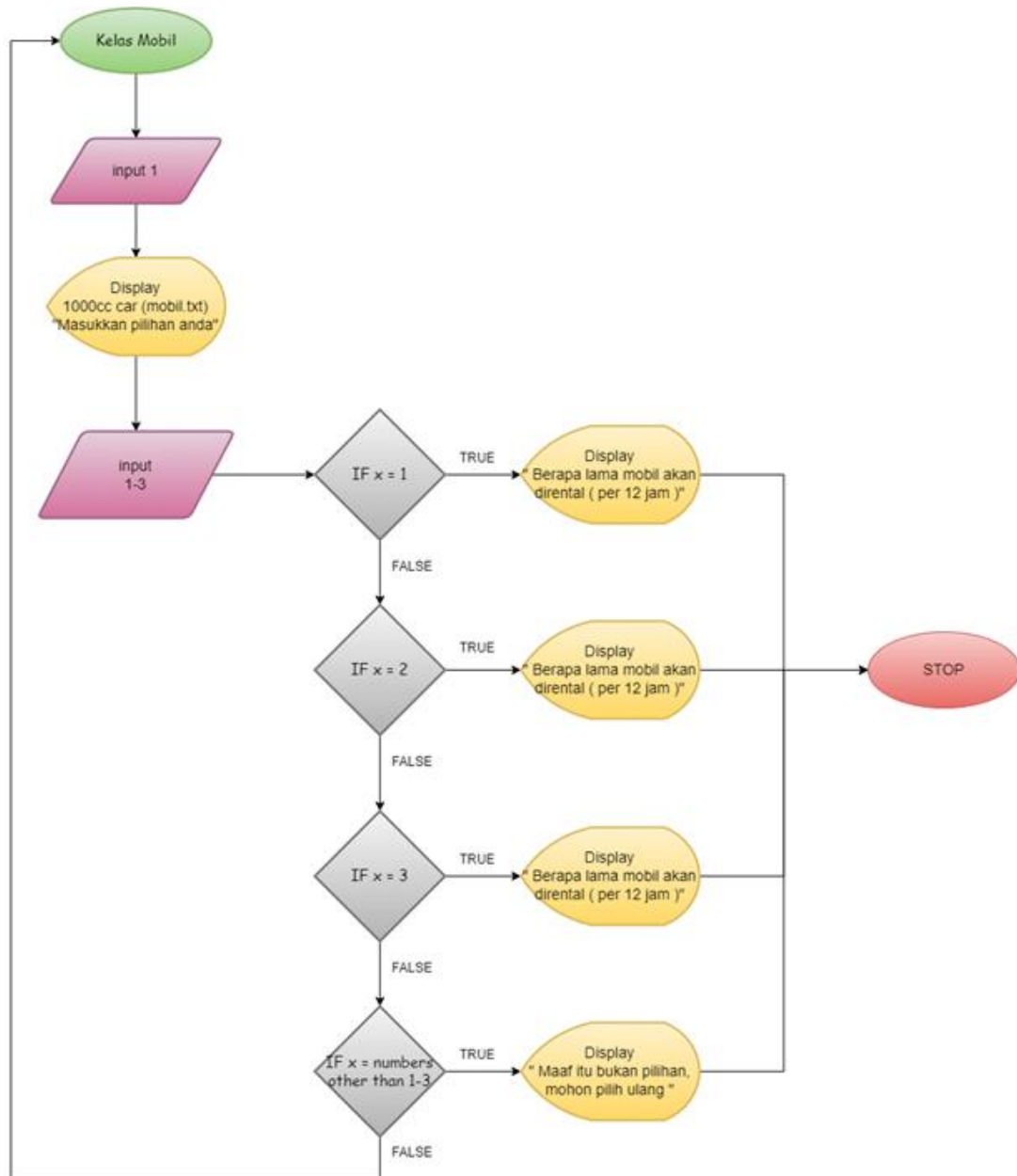
FLOWCHART LOGIN



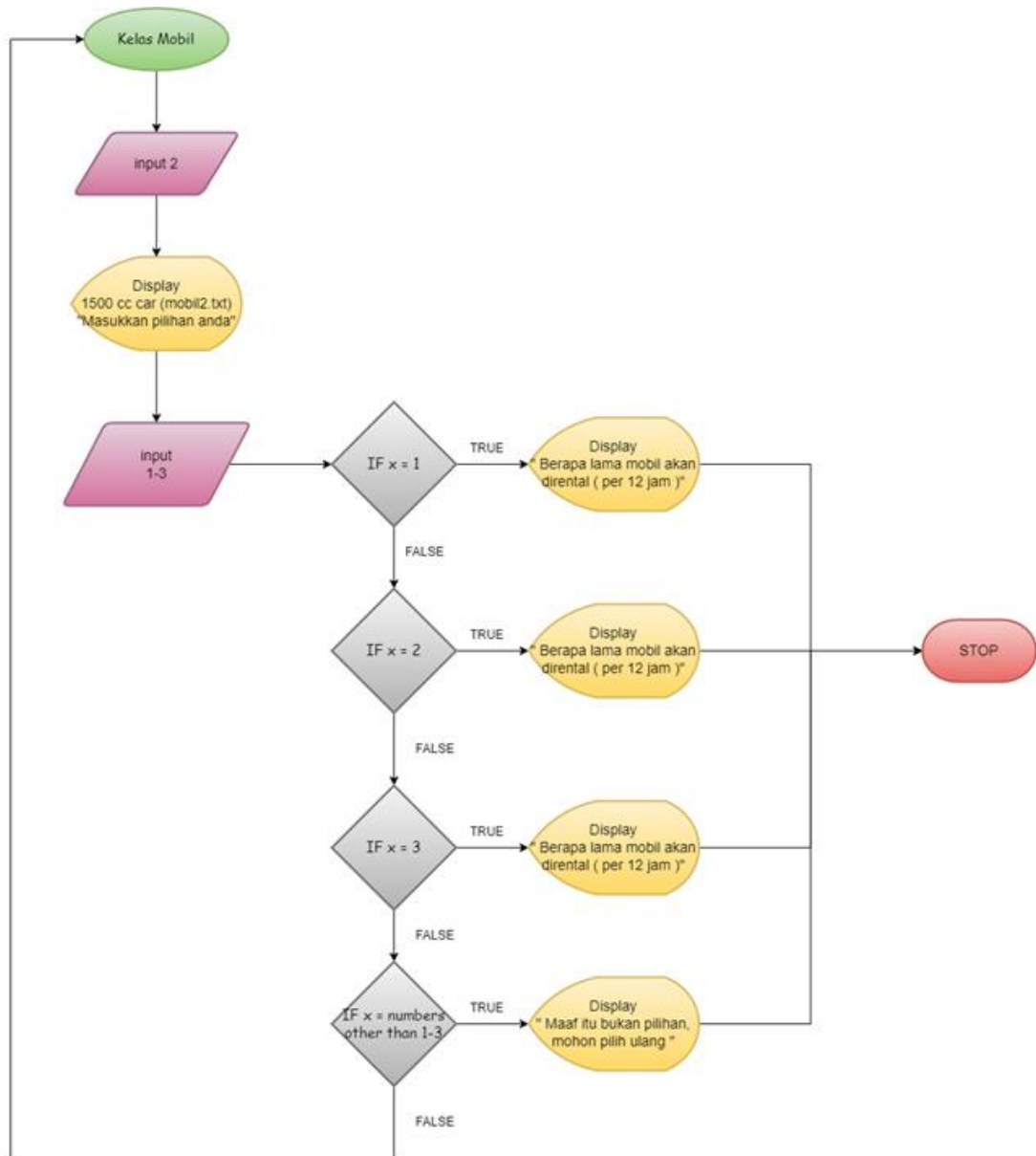
FLOWCHART REGISTER



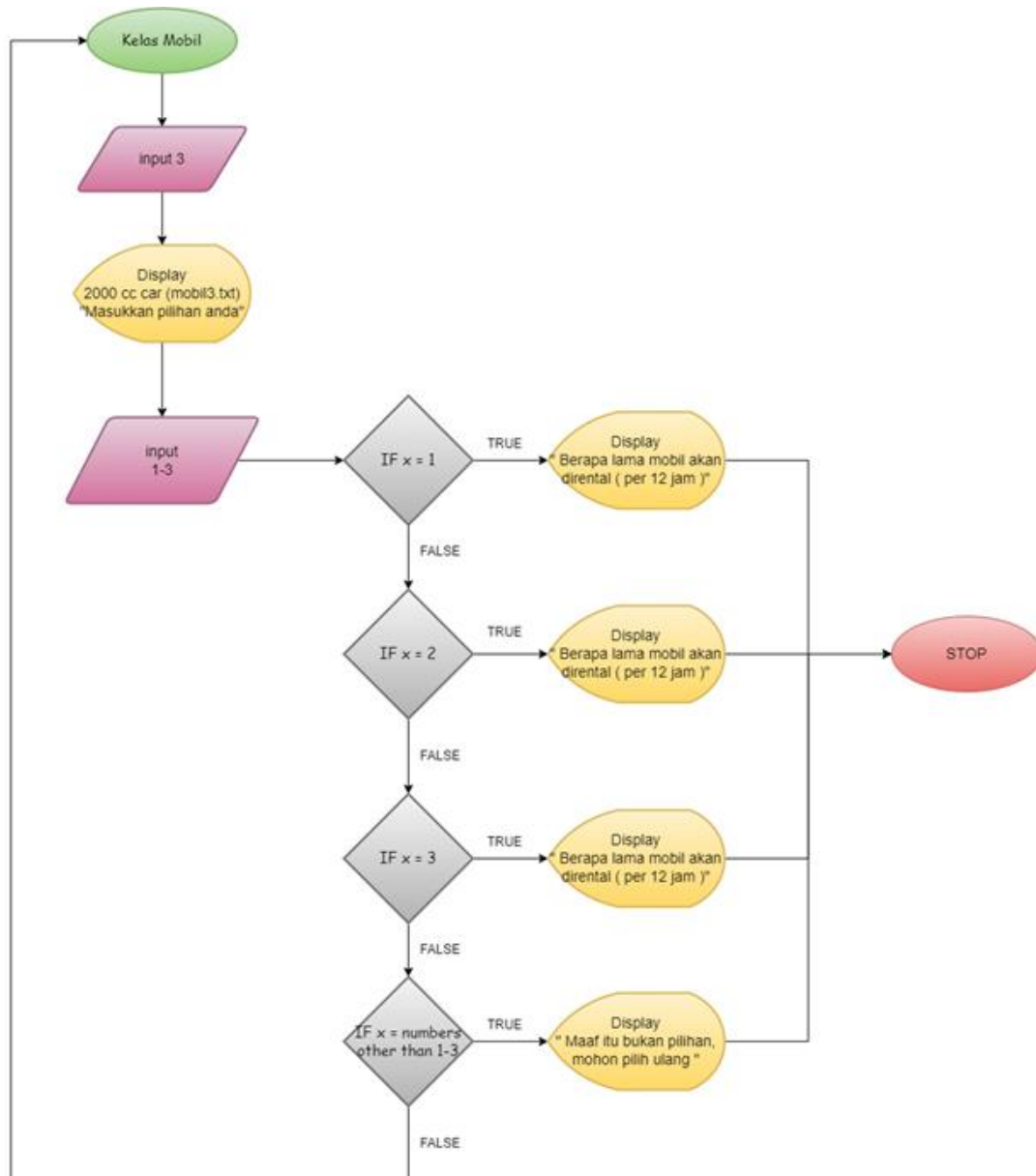
FLOWCHART 1000CC RENT CAR



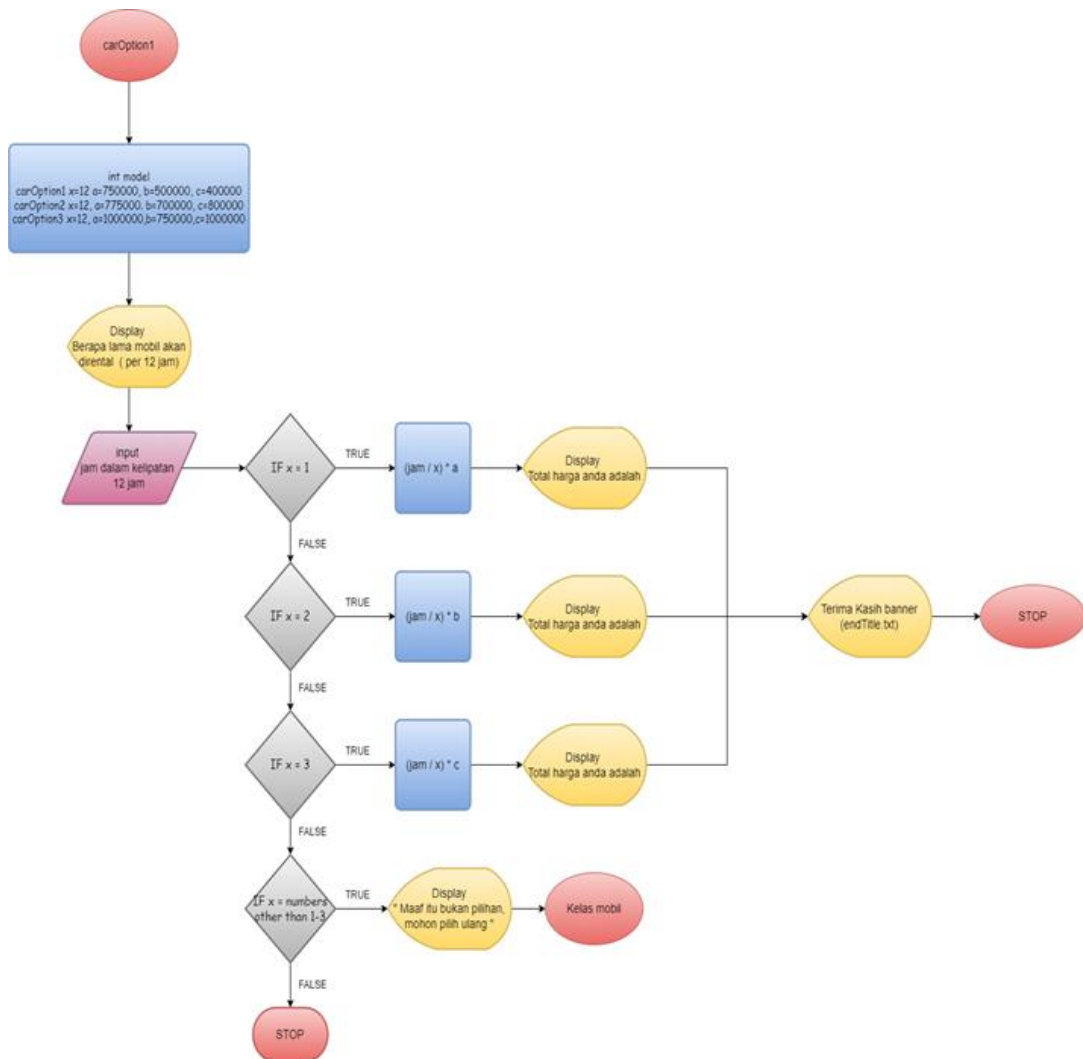
FLOWCHART 1500CC RENT CAR



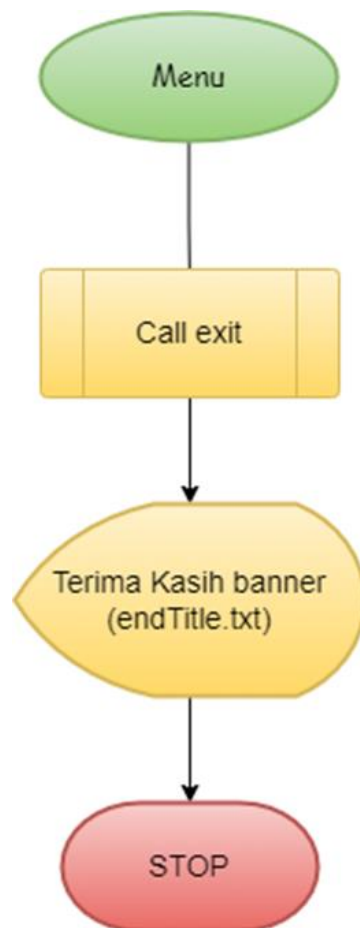
FLOWCHART 2000CC RENT CAR



FLOWCHART CAR INPUT TO FINAL PAYMENT



FLOWCHART EXIT



PROGRAM CODE

```
include <iostream>

#include <string>

#include <fstream>

#include <conio.h>

#include <windows.h>


using namespace std;


void menu();

void login();

void daftar();

void rules();

void exit();

void customer();

void carOption1();

void carOption2();

void carOption3();

void fullscreen();

void startdisplay();

void loading();

void gotoxy(int x, int y);

void bingkai();

void bon(long jam , long total);
```


PROGRAM CODE

```
class homeMenu{
    public:
    menu(void){
        fullscreen();
        loading();
        int x;
        string line;
        gotoxy(15, 1.5);
        ifstream myfile("Title1.txt");
        if(myfile.is_open())
        {
            while (!myfile.eof())
            {
                getline(myfile,line);
                cout << line << endl;
            }
            myfile.close();
        };
        cout << endl;
        cout<< "\n\t \t\t 1. Login ";
        cout<< "\n\t \t\t 2. Register ";
        cout<< "\n\t \t\t 3. Syarat dan Ketentuan ";
        cout<< "\n\t \t\t 4. Exit "<< endl << "\n";
        cout<< "\n\t \t\t Input : ";
        cin>>x;
```

PROGRAM CODE

```
if (x==1){  
    login();  
    system("cls");  
    bingkai();  
    customer();  
}
```

```
else if (x==2){  
    daftar();  
    system("cls");  
    bingkai();  
    customer();  
}
```

```
else if (x==3){  
    system("cls");  
    fullscreen();  
    rules();  
    int a;  
    string line;
```

PROGRAM CODE

```
ifstream myfile("pilihan rules.txt");
if(myfile.is_open())
{
while (!myfile.eof())
{
getline(myfile,line);
cout << line << endl;
}
myfile.close();
};
cout << "Input: ";
cin >> a;
if (a == 1){
    system("cls");
    fullscreen();
}
else if (a == 2){
    system("cls");
    fullscreen();
    exit();
}
}
```

PROGRAM CODE

```
        else if (x==4){
            system("cls");
            fullscreen();
            exit();
        }

    }

};

void fullscreen()
{
    keybd_event(VK_MENU,0x38,0,0);
    keybd_event(VK_RETURN,0x1c,0,0);
    keybd_event(VK_RETURN,0x1c,KEYEVENTF_KEYUP,0);
    keybd_event(VK_MENU,0x38,KEYEVENTF_KEYUP,0);
    system("Color BD");
}
```

PROGRAM CODE

```
void startdisplay(){

    string line;
    ifstream myfile("Title1.txt");
    if(myfile.is_open())
    {
        while (!myfile.eof())
        {
            getline(myfile,line);
            cout << line << endl;
        }
        myfile.close();
    };
}

void delay(void){

    int delay;
    delay = 1;
    while(delay<10000000){
        delay++;
    }
}
```

PROGRAM CODE

```
void gotoxy(int x, int y){
    COORD coord;
    coord.X = x;
    coord.Y = y;
    SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE),coord);
}

void loading(){
    int i,j;
    char ulang;
    char x =219;

    for(i=60 ; i<=100 ; i++){
        system("Color BD");
        gotoxy(i,12);
        printf("-");
        gotoxy(i,14);
        printf("-");
        //system("color A");
        printf("-");

    }
}
```

PROGRAM CODE

```
for(i=0 ; i<=100 ; i++){  
    gotoxy(60,13);  
    cout << "L O A D I N G " << i << " %";  
  
    gotoxy(i,16);  
    cout << x << "\n\n\tMohon bersabar...";  
    if(i<10);  
    if(i>=10 && i<20);  
    if(i>=10);  
  
    delay();  
}  
system("cls");  
  
//bingkai atas  
for(i=1 ; i<=120 ; i++){  
    gotoxy(i, 1);  
    printf("#");  
    gotoxy(i, 15);  
    printf("#");  
    gotoxy(i, 40);  
    printf("#");  
    delay();}
```

PROGRAM CODE

```
//bingkai samping
    for(i=1 ; i<=40 ;i++){
        gotoxy(1, i);
        printf("#");
        gotoxy(120, i);
        printf("#");
        delay();
    }

    getch();
}
```


PROGRAM CODE

```
void bingkai(){  
  
    int i;  
    for(i=1 ; i<=120 ; i++){  
        gotoxy(i, 1);  
        printf("#");  
        gotoxy(i, 40);  
        printf("#");  
    }  
  
    //bingkai samping  
    for(i=1 ; i<=40 ;i++){  
        gotoxy(1, i);  
        printf("#");  
        gotoxy(120, i);  
        printf("#");  
    }  
  
    getch();  
}
```

PROGRAM CODE

```
void login(){
    string email;
    string password;
    cout << endl;

    cout << "\n\t \t\t\tEmail : ";
    cin >> email;
    cout << "\n\t \t\t\tPlease enter Password : ";
    cin >> password;
}

void daftar(){
    string nama, email, no_ktp, alamat, telp;
    cout << "\n\t \t\t\tMasukan Data Diri ";
    cout << "\n\t \t\t\tNama : ";
    cin >> nama;
    cout << "\n\t \t\t\tEmail : ";
    cin >> email;
    cout << "\n\t \t\t\tNo KTP : ";
    cin >> no_ktp;
    cout << "\n\t \t\t\tAlamat : ";
    cin >> alamat;
    cout << "\n\t \t\t\tNo Telepon : ";
    cin >> telp;
}
```

PROGRAM CODE

```
void rules(){
    fullscreen();
    string line;
    ifstream myfile("syaratKetentuan.txt");
    if(myfile.is_open())
    {
        while (!myfile.eof())
        {
            getline(myfile,line);
            cout << line << endl;
        }
        myfile.close();
    };
}

void bon(long jam, long total){
    ofstream myfile ("bon.txt");
    if (myfile.is_open()){
        myfile << "----- \n";
        myfile << "-----  Nota Pembayaran  ----- \n";
        myfile << "----- \n";
        myfile << "- Total Jam = " << jam << "      - \n";
        myfile << "- Total Harga = " << total << "    - \n";
        myfile << "----- \n";
        myfile.close();
    }
}
```

PROGRAM CODE

```
void exit(){  
    fullscreen();  
    string line;  
    ifstream myfile("endtitle.txt");  
    if(myfile.is_open())  
    {  
        while (!myfile.eof())  
        {  
            getline(myfile,line);  
            cout << line << endl;  
        }  
        myfile.close();  
    };  
}
```

PROGRAM CODE

```
void menu(){
    int x;
    string line;
    gotoxy(15, 1.5);
    ifstream myfile("Title1.txt");
    if(myfile.is_open())
    {
        while (!myfile.eof())
        {
            getline(myfile,line);
            cout << line << endl;
        }
        myfile.close();
    };
    cout << endl;
    cout<< "\n\t \t\t 1. Login ";
    cout<< "\n\t \t\t 2. Register ";
    cout<< "\n\t \t\t 3. Syarat dan Ketentuan ";
    cout<< "\n\t \t\t 4. Exit "<< endl << "\n";
    cout<< "\n\t \t\t Input : ";
    bingkai();
    gotoxy(33,26);
    cin>>x;
```

PROGRAM CODE

```
if (x==1){  
    login();  
    system("cls");  
    customer();  
}
```

```
else if (x==2){  
    daftar();  
    system("cls");  
    customer();  
}
```

```
else if (x==3){  
    system("cls");  
    fullscreen();  
    rules();  
    int a;  
    string line;
```

PROGRAM CODE

```
ifstream myfile("pilihan rules.txt");
if(myfile.is_open())
{
while (!myfile.eof())
{
getline(myfile,line);
cout << line << endl;
}
myfile.close();
};
cout << "Input: ";
cin >> a;
if (a == 1){
    system("cls");
    menu();
    fullscreen();
}
else if (a == 2){
    system("cls");
    exit();
    fullscreen();
}
}
```

PROGRAM CODE

```
        else if (x==4){
            system("cls");
            exit();
            fullscreen();
        }
        else {
            fullscreen();
            cout << "Maaf itu bukan pilihan";
            exit();
        }
    }

    else if (y==2){
        system("cls");
        ifstream myfile("mobil2.txt");
        if(myfile.is_open())
        {
            while (!myfile.eof())
            {
                getline(myfile,line);
                cout << line << endl;
            }
            myfile.close();
        };
        carOption2();
    }
```


PROGRAM CODE

```
else if (y==3){
    system("cls");
    ifstream myfile("mobil3.txt");
    if(myfile.is_open())
    {
        while (!myfile.eof())
        {
            getline(myfile,line);
            cout << line << endl;
        }
        myfile.close();
    };
    carOption3();
}
else if (y == 4){
    system("cls");
    menu();
}
else{
    fullscreen();
    cout << "Maaf itu bukan pilihan";
    system("cls");
    exit();
}
}
```

PROGRAM CODE

```
void carOption1(){
    string line;
    int model;

    long jam, total, x = 12, a = 750000, b = 500000, c = 400000;;

    cout << "Masukkan pilihan anda: " << endl;

    cin >> model;

    if (model == 1){
        cout << "Berapa lama mobil akan dirental :    (dalam jam)" << endl;

        cin >> jam;

        total = (jam / x) * a;

        cout << "Total harga anda adalah " << total << endl;

        Sleep(4000);

        bon(jam, total);

        system("cls");

        ifstream myfile("endtitle.txt");
```

PROGRAM CODE

```
        if(myfile.is_open())
        {
            while (!myfile.eof())
            {
                getline(myfile,line);
                cout << line << endl;
            }
            myfile.close();
        };
        Sleep(2000);
        system("cls");
        startdisplay();
        menu();
    }
```

PROGRAM CODE

```
else if (model == 2){  
    cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;  
    cin >> jam;  
    total = (jam / x) * b;  
    cout << "Total harga anda adalah " << total << endl;  
    Sleep(4000);  
    bon(jam, total);  
    system("cls");  
    ifstream myfile("endtitle.txt");  
    if(myfile.is_open())  
    {  
        while (!myfile.eof())  
        {  
            getline(myfile,line);  
            cout << line << endl;  
        }  
        myfile.close();  
    };  
    Sleep(2000);  
    system("cls");  
    startdisplay();  
    menu();  
}
```

PROGRAM CODE

```
else if (model == 3){  
    cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;  
    cin >> jam;  
    total = (jam / x) * c;  
    cout << "Total harga anda adalah " << total << endl;  
    Sleep(4000);  
    bon(jam, total);  
    system("cls");  
    ifstream myfile("endtitle.txt");  
    if(myfile.is_open())  
    {  
        while (!myfile.eof())  
        {  
            getline(myfile,line);  
            cout << line << endl;  
        }  
        myfile.close();  
    };  
    Sleep(2000);  
    system("cls");  
    startdisplay();  
    menu();  
}
```

PROGRAM CODE

```
        else{
            system("cls");
            cout << "Maaf itu bukan pilihan, mohon pilih ulang";
            customer();
        }
    }
}

void carOption2(){
    string line;
    int model;
    long jam, total, x = 12, a = 775000, b = 700000, c = 800000;;
    cout << "Masukkan pilihan anda: " << endl;
    cin >> model;
    if (model == 1){
        cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;
        cin >> jam;
        total = (jam / x) * a;
        cout << "Total harga anda adalah " << total << endl;
        Sleep(4000);
        bon(jam, total);
        system("cls");
        ifstream myfile("endtitle.txt");
```

PROGRAM CODE

```
        if(myfile.is_open())
        {
            while (!myfile.eof())
            {
                getline(myfile,line);
                cout << line << endl;
            }
            myfile.close();
        };
        Sleep(2000);
        system("cls");
        startdisplay();
        menu();
    }
```

PROGRAM CODE

```
else if (model == 2){  
    cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;  
    cin >> jam;  
    total = (jam / x) * b;  
    cout << "Total harga anda adalah " << total << endl;  
    Sleep(4000);  
    bon(jam, total);  
    system("cls");  
    ifstream myfile("endtitle.txt");  
    if(myfile.is_open())  
    {  
        while (!myfile.eof())  
        {  
            getline(myfile,line);  
            cout << line << endl;  
        }  
        myfile.close();  
    };  
    Sleep(2000);  
    system("cls");  
    startdisplay();  
    menu();  
}
```


PROGRAM CODE

```
else if (model == 3){  
    cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;  
    cin >> jam;  
    total = (jam / x) * c;  
    cout << "Total harga anda adalah " << total << endl;  
    Sleep(4000);  
    bon(jam, total);  
    system("cls");  
    ifstream myfile("endtitle.txt");  
    if(myfile.is_open())  
    {  
        while (!myfile.eof())  
        {  
            getline(myfile,line);  
            cout << line << endl;  
        }  
        myfile.close();  
    };  
    Sleep(2000);  
    system("cls");  
    startdisplay();  
    menu();  
}
```

PROGRAM CODE

```
        else{
            system("cls");
            cout << "Maaf itu bukan pilihan, mohon pilih ulang";
            customer();
        }
    }
void carOption3(){
    string line;
    int model;
    long jam, total, x = 12, a = 1000000, b = 750000, c = 10000000;
    cout << "Masukkan pilihan anda: " << endl;
    cin >> model;
    if (model == 1){
        cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;
        cin >> jam;
        total = (jam / x) * a;
        cout << "Total harga anda adalah " << total << endl;
        Sleep(4000);
        bon(jam, total);
        system("cls");
        ifstream myfile("endtitle.txt");
```

PROGRAM CODE

```
        if(myfile.is_open())
        {
            while (!myfile.eof())
            {
                getline(myfile,line);
                cout << line << endl;
            }
            myfile.close();
        };
        Sleep(2000);
        system("cls");
        startdisplay();
        menu();
    }
```

PROGRAM CODE

```
else if (model == 2){  
    cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;  
    cin >> jam;  
    total = (jam / x) * b;  
    cout << "Total harga anda adalah " << total << endl;  
    Sleep(4000);  
    bon(jam, total);  
    system("cls");  
    ifstream myfile("endtitle.txt");  
    if(myfile.is_open())  
    {  
        while (!myfile.eof())  
        {  
            getline(myfile,line);  
            cout << line << endl;  
        }  
        myfile.close();  
    };  
    Sleep(2000);  
    system("cls");  
    startdisplay();  
    menu();  
}
```

PROGRAM CODE

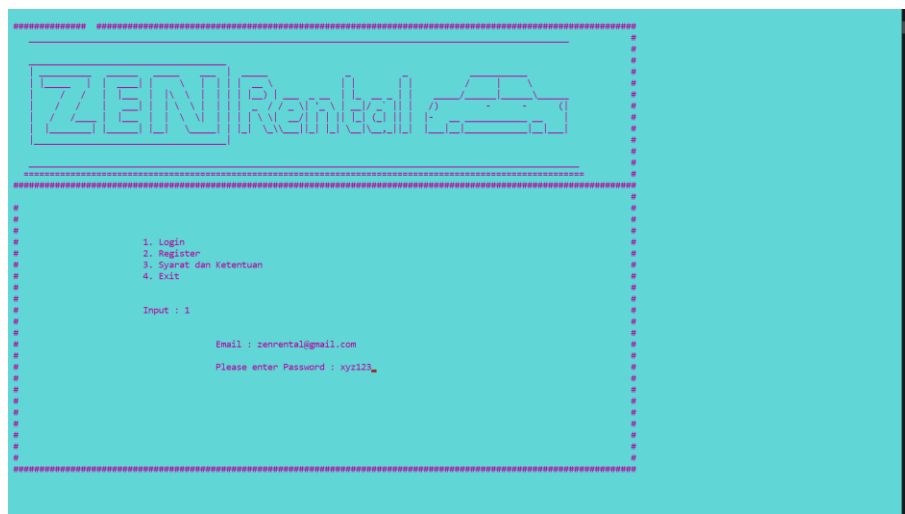
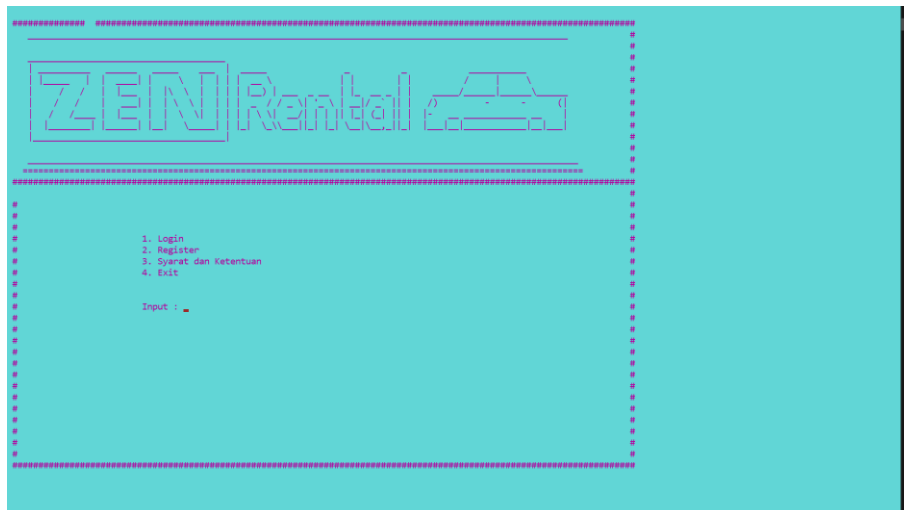
```
else if (model == 3){  
    cout << "Berapa lama mobil akan dirental :   (dalam jam)" << endl;  
    cin >> jam;  
    total = (jam / x) * c;  
    cout << "Total harga anda adalah " << total << endl;  
    Sleep(4000);  
    bon(jam, total);  
    system("cls");  
    ifstream myfile("endtitle.txt");  
    if(myfile.is_open())  
    {  
        while (!myfile.eof())  
        {  
            getline(myfile,line);  
            cout << line << endl;  
        }  
        myfile.close();  
    };  
    Sleep(2000);  
    system("cls");  
    startdisplay();  
    menu();  
}
```

PROGRAM CODE

```
        else{
            system("cls");
            cout << "Maaf itu bukan pilihan, mohon pilih ulang";
            customer();
        }
    }

int main(){
    homeMenu tester;
    tester.menu();
    return 0;
}
```

OUTPUT



OUTPUT

The screenshot shows a Java Swing window titled "Kelas Mobil". Inside the window, there is a text area with the following content:

```

Silahkan Pilih Kelas Mobil
1. 1000 CC
2. 1500 CC
3. 2000 CC
4. Back
Input : 
  
```

The text area is surrounded by a decorative border of asterisks. The window has a standard Mac OS X title bar with red, yellow, and green buttons.

```

-----
Pilihan anda telah diterima -----
Silakan memilih model mobil yang diinginkan -----
-----
1. Toyota, Model : Raize GR, Year : 2021, Harga : 750000/12 jam -----
2. Daihatsu, Model : Siga, Year : 2018, Harga : 500000/12 jam -----
3. Renault, Model : Kwid, Year : 2020, Harga : 400000/12 jam -----
-----
Masukkan pilihan anda:
1
Berapa lama mobil akan dirental : (dalam jam)
36
Total harga anda adalah 2250000

```


OUTPUT

```
=====
ZEN Rental
=====

1. Login
2. Register
3. Syarat dan Ketentuan
4. Exit

Input :

Masukan Data Diri
Nama : zen
Email : zenrental@gmail.com
No KTP : 123456789
Alamat : Jakarta
No Telepon : 08770999999
=====
```

```
D:\Zidan\CCIT\New folder\Project 1\carRentalSystem.exe
Syarat dan Ketentuan

1. Sewa Mobil belum termasuk Driver
2. Booking min 2 (dua) hari sebelum keberangkatan
3. Biaya belum termasuk : Tol, bensin, dan Parkir
4. Penyewa dilarang menggadaikan kendaraan
5. Penyewa dilarang menyewakan kembali kepada orang lain
6. Penyewa dilarang menjual kendaraan
7. Penyewa dilarang menindah tangankan sewa
8. Penyewa dilarang menggunakan mobil untuk tindak kejahatan
9. Penyewa dilarang menaikkan harga sewa dari penawaran kami (Mark Up)
10. Penyewa dilarang mendaran hanya dapat dikemudikan oleh orang yang memiliki SIM

Input: 
```