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**(U17CO110)**

1. **Grades and its equivalence table..**

#include <bits/stdc++.h>

using namespace std;

#define int long long

void solve()

{

float m;

cin>>m;

int marks=round(m);

string grade;

if(marks>=90)

grade="A+";

else if(marks>=80)

grade="A";

else if(marks>=70)

grade="B";

else if(marks>=60)

grade="C";

else if(marks>=50)

grade="D";

else

grade="F";

cout<<"Grade is "<<grade<<endl;

}

int main()

{

solve();

}

**Equivalence Partitioning Table:-**

|  |  |
| --- | --- |
| Possible Classes | Expected Results/ Grades |
| < 50 | F |
| {50 - 59} | D |
| {60 - 69} | C |
| {70 - 79} | B |
| {80 - 89} | A |
| >= 90 | A+ |

**Boundary Value Test Cases:-** {0,49,50,51,59,60,61,69,70,71,79,80,81,89,90,91,99,100}

1. **Insurance Quote..**

#include <bits/stdc++.h>

using namespace std;

#define int long long

void solve()

{

int base;

cout<<"Enter base pay of the car"<<endl;

cin>>base;

cout<<"Enter your age"<<endl;

int age;

cin>>age;

char ch,g;

cout<<”Enter gender – m/f”<<endl;

cin>>g;

cout<<"For Business ? Y or N"<<endl;

cin>>ch;

double pay;

if(age>60){

pay=0.9\*base;

}

If(age<25&&g=’m’){

pay=1.5\*base;

}

if(ch=='Y'){

pay=1.2\*pay;

}

cout<<"You need to pay $ "<<pay<<" for the insurance coverage.."<<endl;

}

int main()

{

solve();

}

//Enter base pay of the car

//300

//Enter your age

//65

//Enter gender

//f

//For Business ? Y or N

// Y

//You need to pay $ 324 for the insurance coverage..

2.1 Decision Table to cover decision paths..

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Conditions | Case 1 | Case 2 | Case 3 | Case 4 | Case 5 |
| Age | >60 | <25 | Any age | <25 | >25 & <=60 |
| Gender | M/F | M | M/F | F | M/F |
| Business | T/F | T/F | T | T/F | F |
| Result | T | T | T | F | F |

T - Insurance is calculated..

F - No case for such rules/cases.

2.2

Age:-

0 - >60

1 - 25-60

2 - <=25

Gender:-

0 - M

1- F

Business:-

0- Y

1- N

|  |  |  |  |
| --- | --- | --- | --- |
| Age | Gender | Business | Result |
| 0 | 0 | 0 | T |
| 0 | 0 | 1 | T |
| 0 | 1 | 0 | T |
| 0 | 1 | 1 | T |
| 1 | 0 | 0 | F |
| 1 | 0 | 1 | F |
| 1 | 1 | 0 | F |
| 1 | 1 | 1 | F |
| 2 | 0 | 0 | T |
| 2 | 0 | 1 | T |
| 2 | 1 | 0 | F |

T - Insurance is calculated..

F - No case for such rules/cases.