**
DIGITAL PROJECT
ENCS234
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Section : 1
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***1.Description :***

 **2.My Design**

**i.Truth Table**

**ii.k-maps**

**iii. Code :
 module maryam\_1140427(a,b,c,d,A,B,C,D,E,F,G);**

**input a,b,c,d; // inputs**

**output A,B,C,D,E,F,G; // outputs**

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 **A,B,C,D,E,F,G are equations for optainig the outputs :**

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**assign A= ( !b && !c )||(!a && c && d); // the equasion of A**

**assign B= ( !a && !b ) || ( !b && !d ) || ( !a && !d ) || (!a && !c) || (!b && !c); // the equasion of B**

**assign C= ( !a && b) || (!a && c) || ( !b && !d ) || (a && !b && !c); // the equasion of C**

**assign D= ( !a && c && d) || ( !a && !b && d ); // the equasion of D**

**assign E= ( !a && c && d) || ( !a && !b && d ); // the equasion of E**

**assign F= ( !a && !b && c )|| (!a && c && d ) || ( !a && !b && !c ); // the equasion of F**

**assign G= ( !a && b && c && d) || ( !a && b && !c && !d ) || ( !a && !b && c && !d )||
 ( a && !b && !c)||(!b && !c && d) ; // the equasion of G**

**endmodule**

**iv.Simulation:**