**Static Design**

PMW

Timer

DIO

Bush Buttons

Motors

**Microcontroller**

**Application**

start

Is press button4

Speed b: backward 30%

Still press?

End

Speed 0: speed 30%

Still press?

Speed1: forward 30%

Still press?

Speed2: forward 60%

Still

Press?

Speed3: forward 90% Press button1 to move car

Turn Right Is press button2?

Turn left Is press button3?

**Skeleton**

|  |
| --- |
| int main()  {  /\* If you press button4 = 1 :  Yes: speed b();  If button4 = 1  Yes : speed0();  No : wait until button1 = 1  If button4 = 1  Yes : speed1();  No : wait until button1 = 1  If button4 = 1  Yes : speed2();  No : wait until button1 = 1  If button4 = 1  Yes : speed3();  No : wait until button1 = 1  If you press button2 = 1 turnRight();  If you press button3 = 1 turnLeft(); \*/  }  Void speed b()  {  /\*backward , speed = 30%\*/ }  Void speed0()  {  /\*forward , speed = 30%\*/ }  Void speed1()  {  /\*forward , speed = 30%\*/ }  Void speed2()  {  /\*forward , speed = 60%\*/ }  Void speed3()  {  /\*forward , speed = 90%\*/ }  Void turnRight()  { /\* increase left motor speed and decrease right motor\*/ }  Void turnLeft()  { /\* increase Right motor speed and decrease left motor\*/ } |