Program No:	17
Roll No :	1554
Title of Program :	**To control DC motor using potentiometer**
Objective :	**The objective of the code is to read an analog value from pin A2 and output it as a PWM signal on pin A3**

Theory:

An NPN transistor is a type of bipolar junction transistor (BJT) used for switching and amplification. It has three layers: emitter (E), base (B), and collector (C), with the emitter and collector made of N-type material and the base of P-type material.

Key Points:

- Working Principle: Allows current to flow from the collector to the emitter when a small current is applied to the base.

- Operation Modes:

    - Active Mode: For amplification.

    - Saturation Mode: Acts like a closed switch (fully on).

    - Cut-off Mode: Acts like an open switch (fully off).

- Applications: Used in switching circuits, amplifiers, and signal processing.

It's widely used in electronics to control devices like LEDs, motors, and for amplifying signals.

SourceCode:

```cpp
// C++ code
//
void setup()
{

}

void loop()
{
  analogWrite(A3,analogRead(A2));
}
```

Output: