**IMPLEMENTATION:**

Solar powered autonomous robot is constructed by programming the hardware components for ploughing, seeding, pesticide spraying and watering. The solar powered autonomous agricultural robot is placed on the ground, then the robot is controlled by giving the controls through an android mobile application. The commands are already available in the application we have to connect it through the esp32 module. The commands for controlling the motor inorder to move forward, backward, left and right. The robot also stops as soon as an obstacle is detected and the error message is shown in the android application. The controls for seeding, ploughing and watering are also available in the application. The soil sensor checks for the moisture in the soil, if the soil is dry the water is sprayed which is also indicated through an LED. The solar panel is used as a power backup for the robot.

**CONCLUSION:**

The objective of this paper has been achieved which was developing the hardware and software for solar powered autonomous agricultural robot. From observation it clearly shows that it is easy to use, reduces man power, accurate, precise, time efficient and user friendly. The solar powered autonomous agricultural robot has been developed successfully and the functions of the robot can be controlled precisely. This solar powered autonomous agricultural robot is expected to overcome problems such as physical work which requires a lot of energy, wastage of water as it doesn’t water the soil unless it’s necessary and it is not just suitable for small fields but also works just fine in larger lands. By using this robot, farmer can save more time and also reduce lot of labour cost.