**(2)**

**(3)**

**(4)**

**(5)**

**(2)**

**(3)**

**(4)**

**(5)**

**(6)**

**(1)**

Sorter Servos

Infrared barrier sensor

Infrared barrier sensor

Filter Servos

Color Sensor

Arduino Mega 2560

PC (Laptop)

Desktop Application

Database

Arduino Mega 2560

Motor DC

L298 H Bridge

Infrared barrier sensor

Getter Servos

**PB1**

**PE(3, 4, 5), PG5**

**PL1, Pl3**

**PH(3, 4)**

**Data**

**OUT**

**Signal**

**PB3**

**PB2, PL(0, 2, 4, 6)**

**PH5, PH6**

**Signal**

**Data**

**Signal**

**Data**

**PL1, Pl3**

**PC1-7, PD7, PG2**

**Check input marble or not**

**Check position marble**

**Detect color of Marble**

**Sort marbles**

**Check position**

**Get marbles**

**Update Database**

**Update Database**

**Input number of marbles**

**Send Data**

**Input marbles into system**

**BLOCK 1: DETECT COLOR OF MARBLES**

**BLOCK 2: SORTING OR GETTING MARBLES BASE ON COLOR**

**BLOCK 3**

**Bus(x5)**

**USB**

**USB**

**USB**

**(7)**

**(6)**

**(1)**

**Send Data**

**(2)**

**(7)**

**(4)**

**(6)**

**PL1, Pl3**

**Check position**

**PH5, PH6**

**(5)**

**Signal**

**(3)**

Arduino Mega 2560

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Getter Servos

**BLOCK 2: SORTING OR GETTING MARBLES BASE ON COLOR**

**USB**

**USB**

**Update Database**

**(1)**

**BLOCK 3**

**Input number of marbles**

PC (Laptop)

Desktop Application

Database

**Data**

**PC1-7, PD7, PG2**

**Get marbles**

**Sort marbles**

**BLOCK 2: SORTING OR GETTING MARBLES BASE ON COLOR**

**BLOCK 3**

**PE(3, 4, 5), PG5**

**(5)**

**PB2, PL(0, 2, 4, 6)**

**Bus(x5)**

**PB3**

**Check position marble**

**Detect color of Marble**

**Update Database**

**PL1, Pl3**

**Signal**

**Data**

**Check input marble or not**

**Input marbles into system**

**BLOCK 1: DETECT COLOR OF MARBLES**

**(1)**

Sorter Servos

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**PB1**

**PH(3, 4)**

**OUT**

**Signal**

**Data**

**(2)**

**(3)**

**(4)**

**(6)**

**USB**

**USB**