**TEAM 04.**

**ACTIVITY 1: - LIST OF FUNCTIONS.**

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| **Sl.No** | **FUNCTIONS FROM USER**  **PERSPECTIVE** | **FUNCTIONS FROM DESIGNER** |
| 1. | Should count coins. | Count the number of coins inserted. |
| 2. | Should be a compact design. | Count all types of coins. |
| 3. | Maintenance free for a long time. | Indicate when the collector box is full. |
| 4. |  | Identify coins from their size. |
| 4. |  | Should have lock to the collector box. |
| 5. |  | Maintenance free. |
| 6. |  | Collecting should be done quickly and efficiently. |
| 7. |  | Use less energy for working. |
| 8. |  | Damage indicator. |
| 9. |  | Easy to repair in case of any damage. |

**ACTIVITY 2: - FUNCTION TREE.**

**ACTIVITY 3: - MORPHOLOGICAL CHART.**

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| Sl.NO | SUB-FUNCTIONS | MEANS 1 | MEANS 2 | MEANS 3 | MEANS 4 |
| 1. | Count the number of coins. | LASER SENSOR | ULTRASOUND SENSOR | PHOTO-ELETRIC SENSOR | MAGNETIC SENSOR |
| 2. | Collecting of coins in collector box. | BOX MADE OF METAL OR ALLOY. | BOX MADE OF THERMOPLASTIC. | BOX MADE OF THERMOSETTING POLYMER. |
| 3. | Indicating the complete fill of collector box. | PHOTO-ELETRIC SENSOR | LASER SENSOR |  |  |
| 4. | Lock to the collector box. | TRADITIONAL LOCK | BIO-METRIC LOCK | PIN CODE LOCK |  |
| 5. | Durable Outer shell. | SHELL MADE OF THERMO-PLASTIC. | SHELL MADE OF THERMO-SETTING PLOYMER. | SHELL MADE OF METAL OR ALLOY. |  |

**ACTIVITY 4: - SELECTION OF MEANS FOR EACH CONCEPT.**

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| Sl.no | SUB-FUNCTIONS | CONCEPT-1 | CONCEPT-2 | CONCEPT-3 | CONCEPT-4 |
| 1. | Counting no.of coins. | Laser senor | Ultrasound  Sensor | Photoelectric sensor | Magnetic sensor |
| 2. | Collector box. | Metal box | Thermoplastic | Thermosetting polymer | Metal box |
| 3. | Box full indication | Photo electric sensor | Laser sensor | Photoelectric senor | Laser senor |
| 4. | Lock to the box | Traditional  Lock | Biometric lock | Pin code lock | Traditional lock |
| 5. | Outer shell | Thermoplastic shell | Thermosetting polymer shell | Metal shell | Thermoplastic shell |

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| SL.NO | SUB-FUNCTIONS | CONCEPT-5 | CONCEPT-6 | CONCEPT-7 | CONCEPT-8 |
| 1. | Counting no.of coins. | Laser senor | Ultrasound  Sensor | Photoelectric sensor | Magnetic sensor |
| 2. | Collector box. | Thermoplastic | Thermosetting polymer | Metal box | Metal box |
| 3. | Box full indication | Laser sensor | Photoelectric senor | Laser senor | Photo electric sensor |
| 4. | Lock to the box | Biometric lock | Pin code lock | Traditional lock | Traditional  Lock |
| 5. | Outer shell | Thermosetting plastic | Metal shell | Thermoplastic shell | Thermosetting shell |

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| SL.NO | SUB-FUNCTIONS | CONCEPT-9 | CONCEPT-10 | CONCEPT-11 | CONCEPT-12 |
| 1. | Counting no.of coins. | Ultrasound  Sensor | Laser sensor | Magnetic sensor | Photoelectric sensor |
| 2. | Collector box. | Thermoplastic | Thermosetting polymer | Thermoplastic | Metal box |
| 3. | Box full indication | Laser sensor | Photoelectric senor | Laser senor | Photo electric sensor |
| 4. | Lock to the box | Biometric lock | Pin code lock | Traditional lock | Traditional  Lock |
| 5. | Outer shell | Thermosetting plastic | Metal shell | Thermoplastic shell | Thermosetting shell |