**Outline of Approach**

**Material selection:**

We are going to select:

* Best possible material in low price
* Material that is easily available
* Cheapest material for our convenience

**Components:**

* Base plate
* Movable plate
* Striking rod and spring assembly
* Main pipe
* Link
* Trigger

**Working principle:**

* Law of conservation of energy
* Elastic potential energy is main power source
* First, we store energy in the spring
* Then spring release its energy ang give it to the ball

**Range:**

Range depends upon:

* Stiffness of spring
* Angle of projection
* Maximum range angle is between 40 and 50 degrees

**Fabrication steps:**

* Base plate and movable plate joined first
* Striking rod and spring assembly places inside main pipe
* Main pipe joined with movable plate
* Then trigger will attach to the pipe

**Shortcomings in device:**

* Angle measurement
* Rotation of movable plate along only one axis
* Rough surface of pipe from inside
* Air resistance

**Conclusion:**

* The design of this device is most probably the best possible design in our point of view but there are always shortcomings and defects in any engineering device. But we did our best to select a design that has minimum shortcomings.