## Creative Problem Solving

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## What does Creativity mean?

 "Looking at same thing as everyone else and thinking something different"



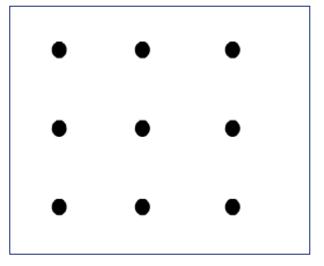




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#### Exercise

Draw four lines
without lifting the pen
or repeating over the line
that cover all 9 points.





#### People

"There are 10 types of people in this world"





#### People

"There are 10 types of people in this world"







#### Problems Based Distribution

"There are 10 types of people in this world"







#### Be Warned!!

 This course with push you towards being ZERO rather than HERO.

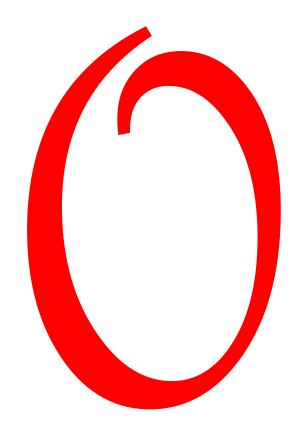
Participate @ your own RISK!!





## But Why ZERO?

- Zero is a symbol of LEARNER.
- It means, "There is scope to LEARN and IMPROVE".





## Zero has 50% Stake in Computers





#### Zero is Powerful!!

Powe to make anything ZERO.

$$A \times 0 = 0$$

• Power to generate 1.

$$(A)^0 = 1$$

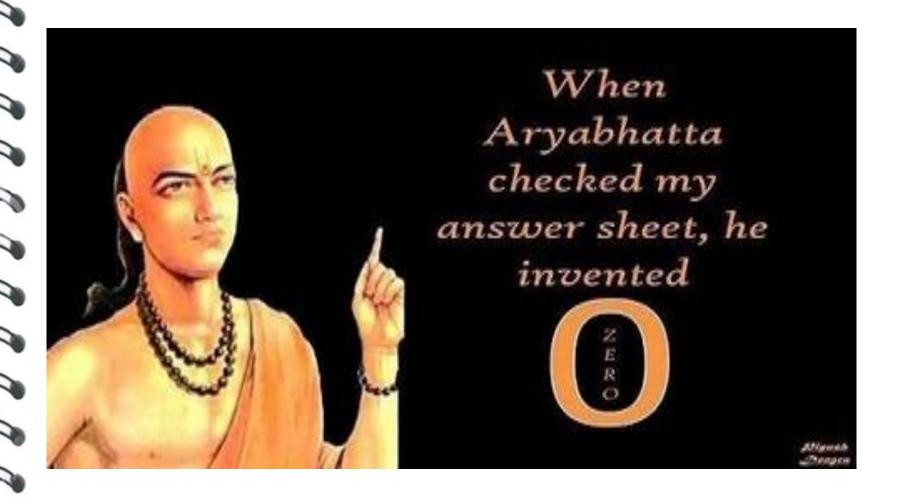
• Power to push anything to INFINITY.

$$A/0 = \infty$$

• Even then it is HUMBLE.



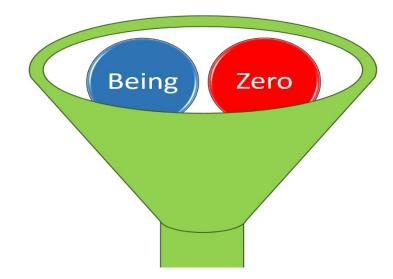
#### Zero was invented in INDIA







# BEING ZERO





#### And Learn to Solve Problems... CREATIVELY!!





#### Being zero – An Attempt

- Deliver Value to strengthen the EDUCATION Pillar, by helping:
  - Student Community
  - Institutions
  - Society
  - Industry
- Fostering learn-by-doing approach to education.
- Realize our potential.
- Strengthen the Belief that we can CREATE, SUSTAIN, GROW!!









#### Rules of the GAME!!

#### PROBLEM DISCUSSION

- Every class a new problem will be PICKED and SOLVED.
- Problem will be from a REAL WORLD SOFTWARE APPLICATION.
- It will cover more than one programming language concepts.
- Thought process, finding multiple solutions and their evaluation.

#### PRACTICE PROBLEMS AND ASSIGNMENTS

Related programming problems will be given for practice in your own time @ home.

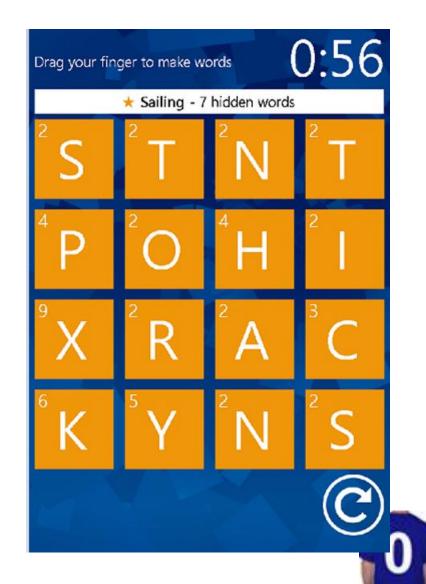
#### PROJECT WORK

- Teams will be created to build one project end to end, solving coding problems and creating its User Interface.
- At the end of COURSE, team is supposed to give a presentation to others.



#### Sample Problem

- Given a 2D array of letters, write code that generates all possible letter combinations based on SWIPE action on touch screen phone.
- Combinations will range from 3-letter words to 16-letter words.
- EXAMPLE WORDS:
  - STOP
  - THORN



**Being Zero**