**Functional Requirements: Version #2**

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| **Req No.** | **Description** |
|  | Create a genetic program for target function (x\*x-1)/2 |
|  | Randomly initialize the first generation to be evaluated |
|  | Create successive generation(s) based on:  Fitness  Crossover  Mutation |
|  | Fitness: Probabilistically determine the fittest individuals from the initial population of that generation |
|  | Crossover: For each pair of fittest individuals, generate a pair of offspring using the Crossover operator |
|  | Mutation: Invert a randomly selected bit in random members from population generated after Crossover |
|  | Use Binary Trees as individuals where –  Operators: +, -, \*, /  Operands: Digits 1-9 |
|  | Execution time = 15 minutes |
|  | Termination criterion – Solution found matching (or close to) Target function or Execution time is over |