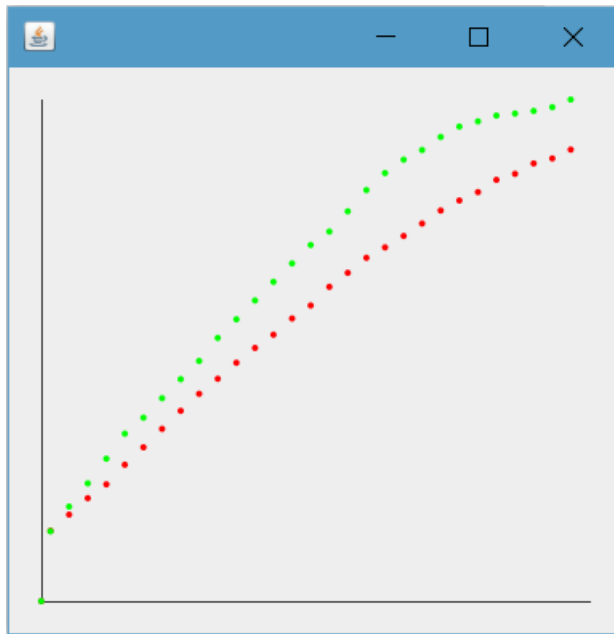


Random distribution 10/90

Population 100

Gens in chromosome 30

Average fitness - **crossover union (probability 1 = 10%)**



Truncate(**red points**): 29 iteration

First Fitness : 8 Genes : [0, 1, 0, 0, 0, 0, 0, 1, 0, 1, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 1, 1]

Middle Fitness :20 Genes : [0, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 1]

Last Fitness : 27 Genes : [1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]

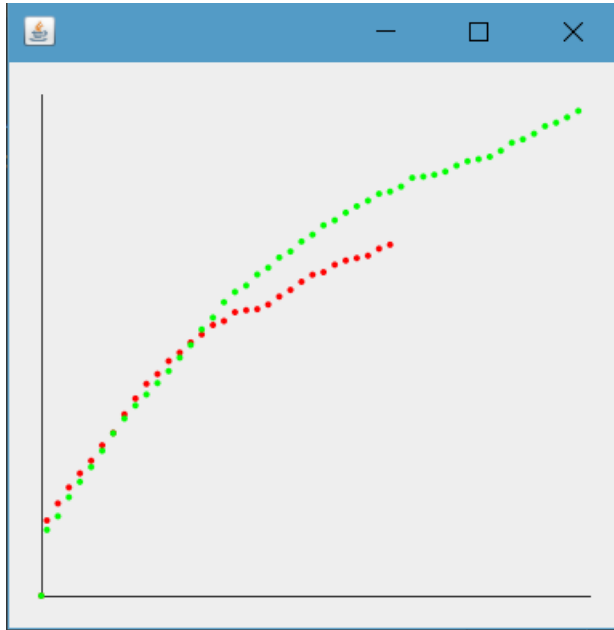
Mutation Truncate(**green points**): 29 iteration

First Fitness : 8 Genes : [0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 1]

Middle Fitness : 24 Genes : [1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 0, 0, 1, 1]

[illegible]

Average fitness - **crossover one point (probability 1 = 10%)**



Truncate(**red points**): 32 iteration

First Fitness : 10 Genes : [0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 1, 1, 0, 0, 0, 1, 1, 1, 1, 0, 1, 0, 0, 0, 0]

Middle Fitness :17 Genes : [1, 0, 1, 1, 0, 0, 0, 0, 1, 1, 1, 0, 1, 1, 0, 1, 0, 1, 0, 0, 1, 1, 1, 1, 0, 1, 0, 0, 1, 1]

Last Fitness : 21 Genes : [1, 1, 1, 1, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 1, 1, 1, 0, 0, 1, 1]

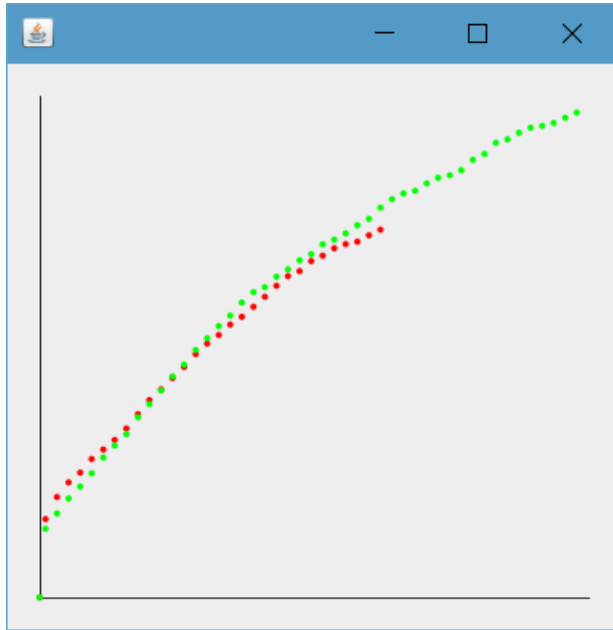
Mutation Truncate(**green points**): 49 iteration

First Fitness :7 Genes : [1, 0, 0, 0, 1, 0, 1, 1, 1, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0]

Middle Fitness : 24 Genes : [1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1]

[illegible]

Average fitness - **crossover twoPoint (probability 1 = 10%)**



Truncate(**red points**): 30 iteration

First Fitness : 8 Genes : [0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 0, 1, 1, 0]

Middle Fitness :18 Genes : [1, 0, 0, 0, 0, 1, 0, 1, 0, 1, 1, 1, 1, 1, 0, 1, 0, 0, 1, 1, 1, 1, 1, 1, 0, 1, 0, 1, 1, 0]

Last Fitness : 22 Genes : [1, 1, 0, 0, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0]

Mutation Truncate(**green points**): 47 iteration

[illegible]

Middle Fitness : 22 Genes [1, 0, 1, 1, 1, 1, 1, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 0, 0, 1]

[illegible]