**Asset Problem**

**Problem:**

Newlywed couples often have lots of things to purchase to fill their new house.

**Representation:**

* The task in hand and the price of items are stored inside a 2-D array [].
* Binary representation ( 1-selected item, 0-not selected item)
* 20 genes as items

**Sample chromosomes:**

Random Generation of chromosomes. These chromosome stores the price of item. Each gene cannot be repeated.

**Strategy:**

1. Parent Selection

Tournament selection is used to solve this problem.

2. Crossover

Order 1 crossover

3. Mutation

Swapping method

4. Survival Selection

Best Parent and Best children. The winner is copied for next generation.

5. Fitness Function

f(x) =1/( ( |max\_budget-accumulatedPrice| )+ n.items + priorityValue)

**Task Distribution:**

Implementation

|  |  |
| --- | --- |
| **Task** | **Person in charge (PIC)** |
| Initialization | Rex |
| Fitness Function Design | Rex |
| Parent Selection | Azim |
| Crossover and Mutation | Wani |
| Survival Selection | Safwan |
| Statistical Analysis | Syaza |

Documentation:

|  |  |
| --- | --- |
| **Task** | **PIC** |
| Abstract | Syaza |
| Introduction | Wani |
| Methodology | Azim |
| Result | Safwan |
| Conclusion | Rex |

**PRIORITY ASSET**

1. Refrigerator 1,500

2. Bedroom Set 5,000

3. Car 20,000

4. Motorcycle 5,000

5. Washing Machine 4,500

6. Water Dispenser 4,000

7. Furniture 3,700

8. Tv 1,200

9. Microwave 1,200

10. Wardrobe 2,000

11. Dining Table 1,200

12. Cutleries Set 500

13. Personal Computer 5,000

14. Air Conditioner 1,800

15. Ceiling Fan 1,000

16. Chandelier 900

17. Oven 350

18. Treadmill 2,000

19. Kitchen Cabinet 1,200

20. Dressing Table 1,500

**TOTAL PRICE RM 63,550**

**BUDGET RM40,000**