SPRINTS

Rate-Monotonic Scheduling Task

Submitted by:

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- Contents:

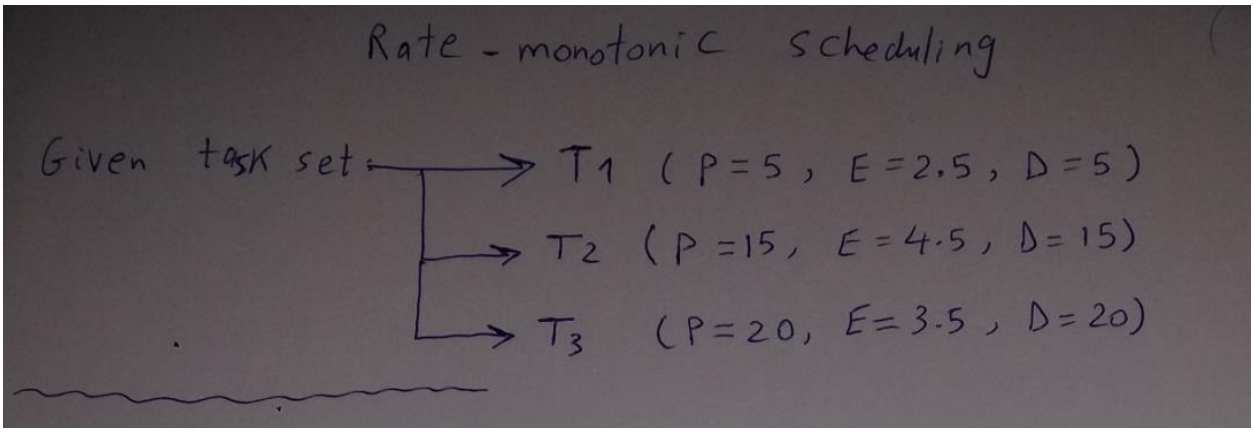
- Problem Statement:

- **Task:** Schedule the following task set using rate-monotonic:

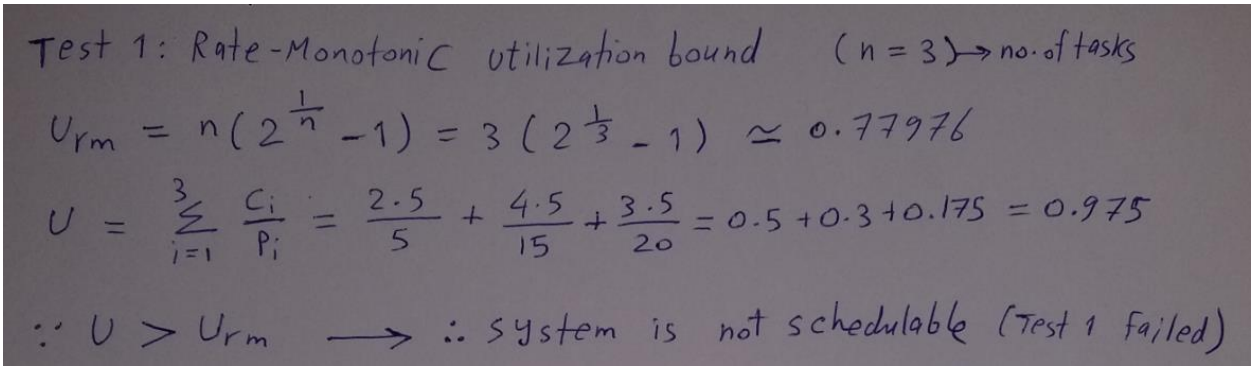
  T1 {P: 5, E: 2.5, D: 5}, T2 {P: 15, E: 4.5, D: 15}, T3 {P: 20, E: 3.5, D: 20}

  - Calculate the Urm.
  - Calculate the time-demand analysis.
  - Model the task set using Simso.
  - **Provide a report with the above points using screenshots and comments on your results and analysis.**

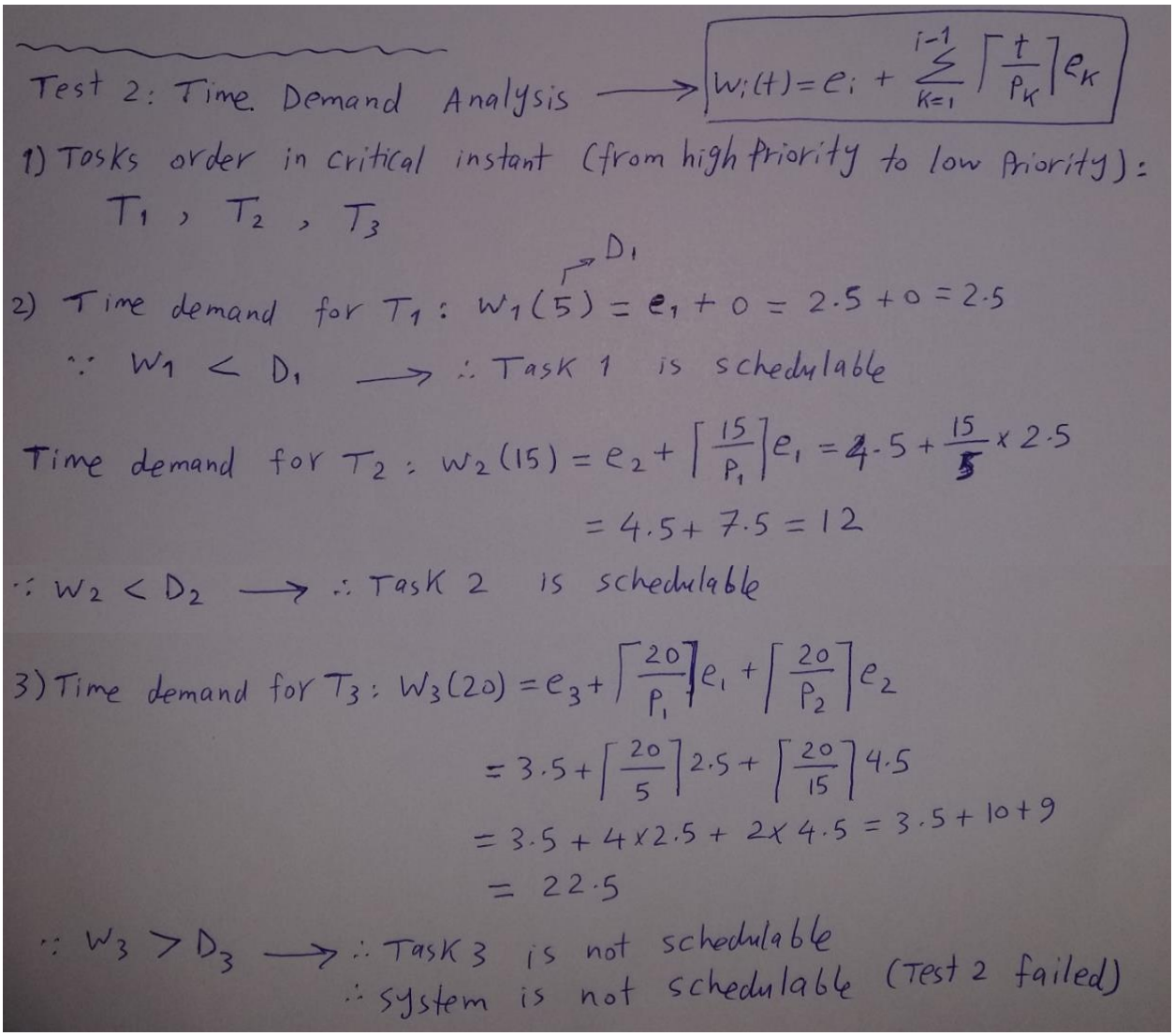
- Breaking down tasks:



- Test1: Rate-Monotonic Utilization Bound

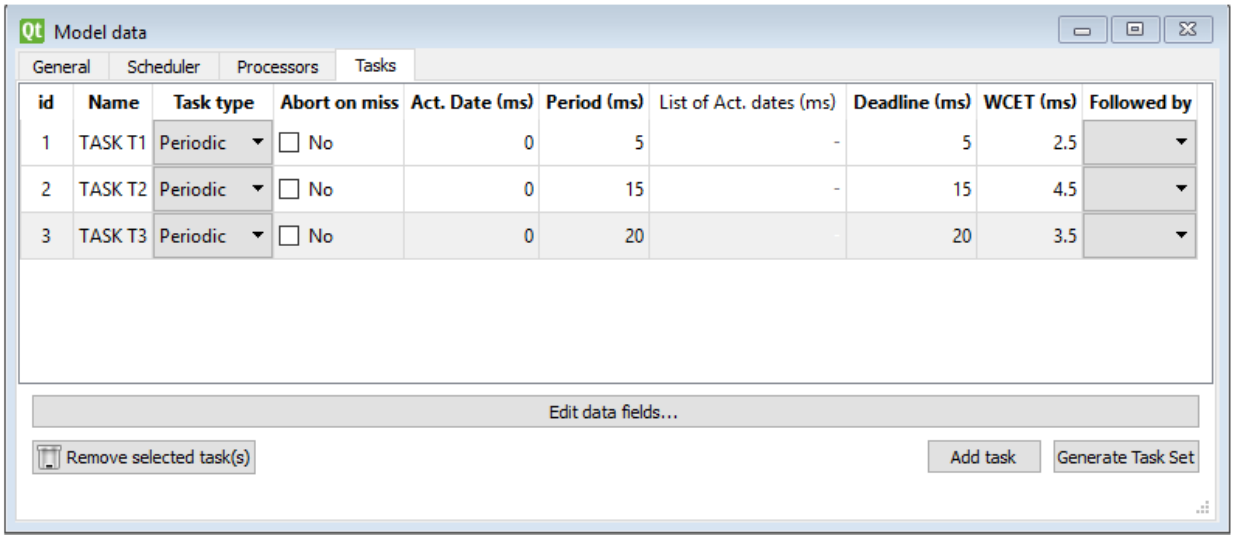


- Test2: Time Demand Analysis:

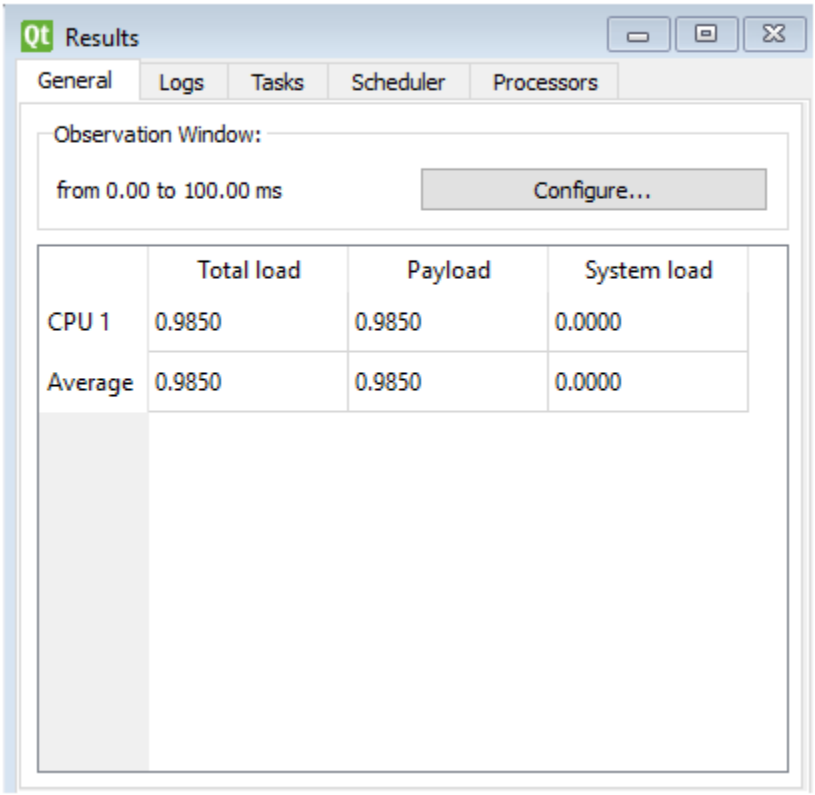


- Modeling the system on simso and verifying schedulability:

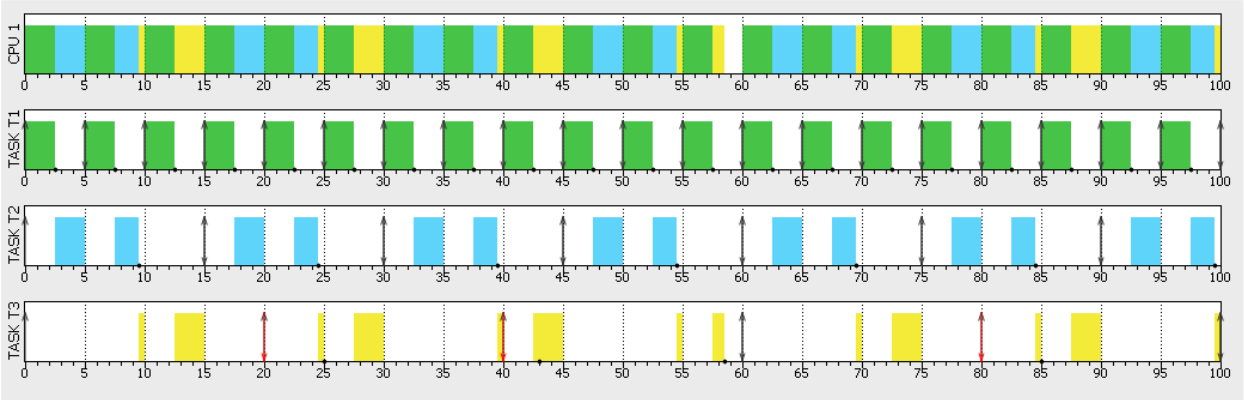
System:



Result:



Gantt:



- Final comments:

System is not schedulable both analytically and graphically using simso and both results match:

- CPU load on simso (0.985) > Urm (0.779) which is proven in Test 1

- Task 3 on simso misses its deadline which is proven in Test 2