|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sr | task | Estimated Duration (weeks) | Dependencies | ES | EF | LS | LF | Slack |
| 1 | A | 2 | (A) can happen in the same time with (B) | 0 | 2 | 0 |  |  |
| 2 | B | 1 | (B) can happen in the same time of (A) |  |  |  |  |  |
| 3 | C | 7 | C()Can happen after finishing (A) |  |  |  |  |  |
| 4 | D | 5 | (D) can start after finishing (C) |  |  |  |  |  |
| 5 | E | 9 |  |  |  |  |  |  |
| 6 | F | 10 |  |  |  |  |  |  |
| 7 | G | 6 |  |  |  |  |  |  |
| 8 | H | 7 |  |  |  |  |  |  |
| 9 | I | 8 |  |  |  |  |  |  |
| 10 | J | 2 |  |  |  |  |  |  |
| 11 | K | 2 |  |  |  |  |  |  |
| 12 | L | 2 |  |  |  |  |  |  |

Question 1

Question 2

I chose 1. Vehicle manufacturing and industrial processes. And

2. Human Resources Management.

A) stakeholders and actors

Application 1: Vehicle manufacturing and industrial processes Stakeholders:

1. Vehicle manufacturers (stakeholder)
2. Workers in the manufacturing plant (stakeholder)
3. Customers of the manufactured vehicles (stakeholder)
4. Automated production line robots (actor)
5. Quality control inspector (actor)
6. Maintenance technician (actor)

Application 2: Human Resources Management Stakeholders:

1. Human Resources department (stakeholder)
2. Employees (stakeholder)
3. Management (stakeholder)
4. HR administrator (actor)
5. Recruiter (actor)
6. Employee (actor)

B) user story

Application 1: Vehicle manufacturing and industrial processes

1. An automated production line robot must be able to assemble vehicle parts accurately and efficiently according to instructions.
2. A quality control inspector must be able to easily access and review production data to ensure that vehicles are being manufactured to meet quality standards.
3. A maintenance technician must be able to identify and fix any issues with the production line robots quickly and easily.

Application 2: Human Resources Management

1. An HR administrator must be able to easily manage employee information and track employee performance.
2. A Recruiter must be able to easily access and manage candidate resumes and information for current open positions.
3. An Employee must be able to easily access and update their personal information and view their performance reviews.

C) use cases

D) identifying which one is the best between (MTTF, MTBF, ROCOF, POFOD or Availability)

Application 1: Vehicle manufacturing and industrial processes

1. An automated production line robot must be able to assemble vehicle parts accurately and efficiently according to instructions.

* MTTF (Mean Time To Failure) is the best reliability metric for this user story as it measures the average time between failures of the robot. This metric is important because it helps manufacturers understand how often they can expect the robot to fail and how long it takes to repair it.

1. A quality control inspector must be able to easily access and review production data to ensure that vehicles are being manufactured to meet quality standards.

* MTBF (Mean Time Between Failures) is the best reliability metric for this user story. This metric measures the average time between system failures, which is important for understanding how often the system will be unavailable for use.

Application 2: Human Resources Management

1. An HR administrator must be able to easily manage employee information and track employee performance.

* Availability is the best reliability metric for this user story. It measures the percentage of time the system is available for use, which is important for understanding how often the system is down and unavailable to users.

1. A Recruiter must be able to easily access and manage candidate resumes and information for current open positions.

* ROCOF (Rate of Change of Frequency) is the best reliability metric for this user story, which measures the rate at which the system's frequency changes over time. This metric is important to understand the stability of the system, as frequent changes in frequency can indicate instability or problems with the system.

E)