===================================QUESTION=================

Consider a factory that manufactures football taking 20 to 40 minutes. The ball is moved from the generation to the inspection machine taking a 2 minutes. There are 3 inspection machine at one place and need 30 to 60 minutes for inspection and reject 30% of football. Simulate for 2000 transaction . Draw GPSS block diagram to simulate this system.

solution:

Here, Manufacture of football takes 20 to 40 minutes so,

mean = (20+40)/2 =30

Generate = 30±10

product take 2 minutes to reach for inspection i.e. ADVANCE = 2, and for inspection

it take 30 to 60 minutes,

mean = (30+60)/2 = 45

ADVANCE = 45±15

==================GPSS CODE=================================

GENERATE 30,10 ; Create parts

ADVANCE 2,0 ; To Inspect

SEIZE Barber ; Get an Inspector

ADVANCE 45,15 ; Inspect

RELEASE Barber ; Free Inspector

TRANSFER 0.3,ACC,REJ ; Select Reject

ACC TERMINATE 1 ; Accepted parts

REJ TERMINATE 1 ; Rejected parts

START 2000 ; Run 2000 parts

========================result================================

GPSS World Simulation Report - Untitled Model 7.13.1

Sunday, June 30, 2024 12:29:21

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| START TIME | END TIME | BLOCKS | FACILITIES | STORAGES |
| 0.000 | 90361.371 | 8 | 1 | 0 |

|  |  |
| --- | --- |
| NAME | VALUE |
| ACC | 7.000 |
| BARBER | 10000.000 |
| REJ | 8.000 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LABEL | LOC | BLOCK TYPE | ENTRY COUNT | CURRENT COUNT | RETRY |
|  | 1 | GENERATE | 3026 | 0 | 0 |
|  | 2 | ADVANCE | 3026 | 1025 | 0 |
|  | 3 | SEIZE | 2001 | 1 | 0 |
|  | 4 | ADVANCE | 2000 | 0 | 0 |
|  | 5 | RELEASE | 2000 | 0 | 0 |
|  | 6 | TRANSFER | 2000 | 0 | 0 |
| ACC | 7 | TERMINATE | 1414 | 0 | 0 |
| REJ | 8 | TERMINATE | 586 | 0 | 0 |

|  |  |
| --- | --- |
| FACILITY | BARBER |
| ENTRIES | 2001 |
| UTIL. | 1.000 |
| AVE. | 45.139 |
| TIME AVAIL | 1 |
| OWNER | 2001 |
| PEND | 0 |
| INTER | 0 |
| RETRY | 0 |
| DELAY | 1025 |

|  |  |
| --- | --- |
| CEC XN | 2001 |
| PRI | 0 |
| M1 | 59337.041 |
| ASSEM | 2001 |
| CURRENT | 3 |
| NEXT | 4 |
| PARAMETER |  |
| VALUE |  |

|  |  |
| --- | --- |
| FEC XN | 3027 |
| PRI | 0 |
| BDT | 90388.134 |
| ASSEM | 3027 |
| CURRENT | 0 |
| NEXT | 1 |
| PARAMETER |  |
| VALUE |  |