Лабораторная работа №17

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Информация

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Цель работы

Создать три модели на языке GPSS

Задание

1. Создать модель ЭВМ с тремя классами
2. Создать модель аэропорта со взлетом и посадкой
3. Создать модель причала

```
ram STORAGE 2

;Моделирование класса A
GENERATE 20,5
QUEUE class_A
ENTER ram,1
DEPART class_A
ADVANCE 20,5
LEAVE ram,1
TERMINATE 0

;Моделирование класса B
GENERATE 20,10
QUEUE class_B
ENTER ram,1
DEPART class_B
ADVANCE 21,3
LEAVE ram,1
TERMINATE 0

;Моделирование класса C
GENERATE 28,5
QUEUE class_C
ENTER ram,2
DEPART class_C
ADVANCE 28,5
LEAVE ram,2
TERMINATE 0

;timer
GENERATE 4800
TERMINATE 1
START 1
```

```
LABEL           LOC  BLOCK TYPE   ENTRY COUNT CURRENT COUNT RETRY
                1    GENERATE         240          0          0
                2    QUEUE            240          4          0
                3    ENTER            236          0          0
                4    DEPART           236          0          0
                5    ADVANCE          236          1          0
                6    LEAVE            235          0          0
                7    TERMINATE        235          0          0
                8    GENERATE         236          0          0
                9    QUEUE            236          5          0
                10   ENTER            231          0          0
                11   DEPART           231          0          0
                12   ADVANCE          231          1          0
                13   LEAVE            230          0          0
                14   TERMINATE        230          0          0
                15   GENERATE         172          0          0
                16   QUEUE            172         172          0
                17   ENTER              0          0          0
                18   DEPART             0          0          0
                19   ADVANCE            0          0          0
                20   LEAVE              0          0          0
                21   TERMINATE          0          0          0
                22   GENERATE           1          0          0
                23   TERMINATE          1          0          0


QUEUE           MAX CONT. ENTRY ENTRY(0) AVE.CONT. AVE.TIME  AVE.(-0) RETRY
  CLASS_A         7    4    240      3     3.288    65.765   66.597    0
  CLASS_B         7    5    236      1     3.280    66.703   66.987    0
  CLASS_C       172  172   172      0    85.786  2394.038 2394.038    0


STORAGE         CAP. REM. MIN. MAX.  ENTRIES AVL.  AVE.C. UTIL. RETRY DELAY
  RAM             2    0    0    2      467    1    1.988  0.994   0   181
```

```
; arrival
GENERATE 10,5,,,1
ASSIGN 1,0
QUEUE arrival
landing GATE NU runway,wait
SEIZE runway
DEPART arrival
ADVANCE 2
RELEASE runway
TERMINATE 0

; wait
wait TEST L p1,5,goaway
ADVANCE 5
ASSIGN 1+,1
TRANSFER 0,landing
goaway SEIZE reserve
DEPART arrival
RELEASE reserve
TERMINATE 0

; runway
GENERATE 10,2,,,2
QUEUE takeoff
SEIZE runway
DEPART takeoff
ADVANCE 2
RELEASE runway
TERMINATE 0
;timer
GENERATE 1440
TERMINATE 1
START 1
```

```
LABEL          LOC  BLOCK TYPE    ENTRY COUNT  CURRENT COUNT  RETRY
                1    GENERATE         146            0          0
                2    ASSIGN           146            0          0
                3    QUEUE            146            0          0
LANDING         4    GATE             184            0          0
                5    SEIZE            146            0          0
                6    DEPART           146            0          0
                7    ADVANCE          146            0          0
                8    RELEASE          146            0          0
                9    TERMINATE        146            0          0
WAIT           10    TEST              38            0          0
               11    ADVANCE           38            0          0
               12    ASSIGN            38            0          0
               13    TRANSFER          38            0          0
GOAWAY         14    SEIZE              0            0          0
               15    DEPART             0            0          0
               16    RELEASE            0            0          0
               17    TERMINATE          0            0          0
               18    GENERATE         142            0          0
               19    QUEUE            142            0          0
               20    SEIZE            142            0          0
               21    DEPART           142            0          0
               22    ADVANCE          142            0          0
               23    RELEASE          142            0          0
               24    TERMINATE        142            0          0
               25    GENERATE           1            0          0
               26    TERMINATE          1            0          0


FACILITY    ENTRIES  UTIL.  AVE. TIME  AVAIL.  OWNER  PEND  INTER  RETRY  DELAY
  RUNWAY      288    0.400   2.000       1        0     0     0      0      0


QUEUE        MAX  CONT.  ENTRY  ENTRY(0)  AVE.CONT.  AVE.TIME  AVE.(-0)  RETRY
  TAKEOFF      1    0     142     114       0.017      0.173     0.880     0
  ARRIVAL      2    0     146     114       0.132      1.301     5.937     0
```

```
prich STORAGE 3
GENERATE 20,5

QUEUE arrive
ENTER prich,3
DEPART arrive
ADVANCE 10,3
LEAVE prich,3
TERMINATE 0

GENERATE 24
TERMINATE 1
START 180
```

```
prich STORAGE 2
GENERATE 30,10

QUEUE arrive
ENTER prich,2
DEPART arrive
ADVANCE 8,4
LEAVE prich,2
TERMINATE 0

GENERATE 24
TERMINATE 1
START 180
```

```
                    GPSS World Simulation Report - Untitled Model 3.3.1


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            START TIME        END TIME  BLOCKS  FACILITIES  STORAGES
              0.000           4320.000    9        0           1


              NAME                    VALUE
            ARRIVE                  10001.000
            PRICH                   10000.000


    LABEL              LOC  BLOCK TYPE     ENTRY COUNT CURRENT COUNT RETRY
                        1   GENERATE          215        0        0
                        2   QUEUE             215        0        0
                        3   ENTER             215        0        0
                        4   DEPART            215        0        0
                        5   ADVANCE           215        1        0
                        6   LEAVE             214        0        0
                        7   TERMINATE         214        0        0
                        8   GENERATE          180        0        0
                        9   TERMINATE         180        0        0


    QUEUE           MAX CONT. ENTRY ENTRY(0) AVE.CONT. AVE.TIME   AVE.(-0) RETRY
      ARRIVE          1   0    215    215     0.000     0.000      0.000   0


    STORAGE         CAP. REM. MIN. MAX.  ENTRIES AVL.  AVE.C. UTIL. RETRY DELAY
      PRICH          5    2    0    3      645    1    1.485  0.297   0     0


    FEC XN    PRI      BDT      ASSEM CURRENT  NEXT  PARAMETER    VALUE
      395      0     4324.260    395    5       6
      396      0     4335.233    396    0       1
      397      0     4344.000    397    0       8
```

Мы создали три модели на языке GPSS с приоритетами, разными типами данных, используя знания из предыдущих работ