RESPONSI UAS

SISTEM OPERASI PRAKTIK – V

Dosen Pengampu: Iwan Hartadi Tri Untoro, S.T., M.Kom.

Asisten Dosen: Galang Aidil Akbar

Disusun Oleh:

5200411094 – Yusi Erlita

Informatika B

PRODI INFORMATIKA

FAKULTAS SAINS & TEKNOLOGY

UNIVERSITAS TEKNOLOGY YOGYAKARTA

2021/2022

1. Buatlah sebuah program yang mensimulasikan manajemen RAM didalam komputer?
   JAWAB=
   - Kode Script

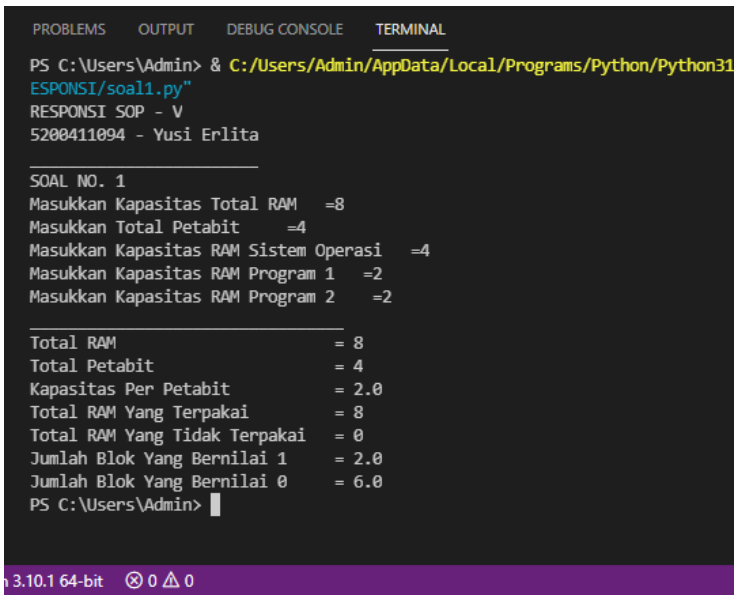
```
print("RESPONSI SOP - V")
print("5200411094 - Yusi Erlita")
print("_________________________")
print("SOAL NO. 1")

RAM = int(input("Masukkan Kapasitas Total RAM   ="))
Petabit = int(input("Masukkan Total Petabit     ="))
OS = int(input("Masukkan Kapasitas RAM Sistem Operasi   ="))
RAMsatu = int(input("Masukkan Kapasitas RAM Program 1   ="))
RAMdua = int(input("Masukkan Kapasitas RAM Program 2    ="))

KPetabit = RAM / Petabit
TotalRAM = OS + RAMsatu + RAMdua
RamTidakTerpakai = RAM - TotalRAM
JBlokSatu = RAM / Petabit
JBlokNol = RAM - KPetabit
print ("_____________________________________")

print ("Total RAM                       =",RAM)
print ("Total Petabit                   =",Petabit)
print ("Kapasitas Per Petabit           =",KPetabit)
print ("Total RAM Yang Terpakai         =",TotalRAM)
print ("Total RAM Yang Tidak Terpakai   =",RamTidakTerpakai)
print ("Jumlah Blok Yang Bernilai 1     =",JBlokSatu)
print ("Jumlah Blok Yang Bernilai 0     =",JBlokNol)
```

   - Hasil



2. Buatlah sebuah program yang mensimulasikan manajemen penjadwalan dengan algoritma Round Robin?
   JAWAB=
   - Kode Script

```
print("RESPONSI SOP - V")
print("5200411094 - Yusi Erlita")
print("_____________________")
print("SOAL NO. 2")

def Waiting_Time(proses, jumlah, burst_time, waiting_time, quantum):
    ram_bursttime = [0] * jumlah
    for y in range(jumlah):
        ram_bursttime[y] = burst_time[y]
    t = 0
    while(1):
        selesai = True
        for y in range(jumlah):
            if (ram_bursttime[y] > 0) :
                selesai = False
                if (ram_bursttime[y] > quantum) :
                    t += quantum
                    ram_bursttime[y] -= quantum
                else:
                    t = t + ram_bursttime[y]
                    waiting_time[y] = t - burst_time[y]
                    ram_bursttime[y] = 0
        if (selesai == True):break

def TurnAround_Time(proses, jumlah, burst_time, waiting_time,
taroundtime):
    for y in range(jumlah):
        taroundtime[y] = burst_time[y] + waiting_time[y]

def Average_Time(proses, jumlah, burst_time, quantum):
    Waiting_time = [0] * jumlah
    taround_time = [0] * jumlah
    Waiting_Time(proses, jumlah, burst_time, Waiting_time, quantum)
    TurnAround_Time(proses, jumlah, burst_time, Waiting_time,
taround_time)
    print("Proses Burst Time Waiting", "Turn Around Time")
    total_waitingtime = 0
    total_taroundtime = 0
    for y in range(jumlah):
        total_waitingtime = total_waitingtime + Waiting_time[y]
        total_taroundtime = total_taroundtime + taround_time[y]
        print(" ", y + 1, "\t\t", burst_time[y],
            "\t\t", Waiting_time[y], "\t\t", taround_time[y])
```

```
    print("\nAverage waiting time = %.5f "%(total_waitingtime /jumlah)
)
    print("Average turn around time = %.5f "% (total_taroundtime /
jumlah))

if __name__ =="__main__":
    proses = [1, 2, 3]
    jumlah = 3
    burst_time = [7, 17, 3]
    quantum = 2;
    Average_Time(proses, jumlah, burst_time, quantum)
```

- Hasil

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

PS C:\Users\Admin> & C:/Users/Admin/AppData/Local/Programs/Python/Python310/python.exe
Sistem Operasi Praktik - 5/UAS RESPONSI/soal2.py"
RESPONSI SOP - V
5200411094 - Yusi Erlita
_____________________
SOAL NO. 2
Proses Burst Time Waiting Turn Around Time
  1             7             9             16
  2             17            10            27
  3             3             8             11

Average waiting time = 9.00000
Average turn around time = 18.00000
PS C:\Users\Admin>
```