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Bafna Gold -Tage: Wouls a c program to simulate the Lollowing nonpower empting CPD Scheduliky algorithm to Find twina yound otime and waiting time. FCFS SIL # Include Stalians int hij Pos, temp, choice , Burst time [20], waiting-time[20], Twin-are -und-time[20], process [20], totalso; Float aug Furn- around time to. avg accorditing time = a , ang Anival time o , into Waiting time [0]: as for (して) こうくりょうけん) Walting time[1]:0; feod (iza; is 1; j+4) Waiting time[i]+= Burst time[i] brind ["In Pyocass It It Bust Time Waiting Time It 120; 1<p; 1+1)q Twen around time-time[1]= Bursttimerize Waiting-timerizi ava waiting time += waiting time[i] & TWIS adown timet = Twees adjourned times ["In gopocepit t'Burst Time It It in the MILTHOUSEN

= (+1; j < h) j ++) . (Burst Time [j] & Burst time (Poss) 1p - Burgt tim [i]: Burst time [1] = Burst time [poss, Burst - time[pos] = timbi emp = process [i]; Spocesifi) = procediposi brocess [hos] = temp; - temp= Arrival times; luardina timetala

Bafna Gold -

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Prima I the registre Dr. Process Ii), Burst-trongerij Waiting- time [i] . Twin-artound-timelis) avg Turn against time = (flood) toldy brindfulling Average wording If", avg - woiding - time) bring (" In Average Twingspound I my. "I fin", ang - Twin a found - of eme); int main ord print (" Enter the total no. of processes: "); Scanf ("1'd". 2n), printello Enter Butst Timelh foolisosikniita) brint ("P[1:d]:"i+1 Scanfil" lal", & Burst time (13); process [i] = i+1; While (1) of print 1"15 -- MAZNI MENIU-- In") printfor, FCFS Schodeling In 2. SJF Scheduling (1) ("In Enter your chaice:") Scanf (" " d' xchoig); Switch (choice 12 casil = ECES(); b. Stealer depuelt 1 Pr edge : SJF(); break

Bafna Gold -

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Perlion Addition, Subdiaction multip lication < stalio.h) Hinclude (Stalib) Ind main () a[20][20], b[20][20] ms[20][20]; t mm[20][20]; Ender the Vally for iital) for (1=0; j<7; j+4) & Scant ("I'd", Ratistis) It Enters (1:0) iccildd) Cittita = Ci

Aux (j=0 j j < v ; j++) ? mm [1][1] = 0: for (Kzoi K < Ciktd) } montistist = atistik) * bckstis; private (" output"); private (" The addiction modrix is: For (i=o) iccilda) of for (1=0 3) (ci) ++) d print ("Id", matistis): prind 1"("). Exhat ("The Substraction madrix is: [n"); For (iso: iccildd) } For ()=0 ; j < 8 sixter) 2 print (" 101" ms [i][)) proint (" 12") for (i=0; icc) itt) tox (150; 158;) ++) & print(" +d", mm[13(1)); prid(1"4");



Bafna Gold -Weite a c perogram to simulate the Following cru schooluling algorithm waiting time Policelity (pour empting & Mon - pour - mobile) # include < Stdia.h) # include < Std.bool. h> # define QUANT,UM 2 int two may ound time (int polocessess [], ind n, int bell], int we [], int priority[] int Dem-bt[n]; For (Int 1=0; i< h; i++) Olenj-bt[i] = bt[i]; · bout done = delle; For (int 120 sien ; itt) a 1- (olem-b-([1] > QUANTUM) } ++= QUANTUM: elom_b+tij -= QUANITUM; els of t= ++ sum b+ [i]; WHID: I - bettid; vien btrig=0; (don == 1 tuy) 691 69K;

retwin 1; find org Tim (int processes () ind bill) tat[n], total totalwaitingtime (bolocesses turnariound time (processes) In PHOCESSES HIT BUYER t priority 17 In Averlage working time " (& loat) total - wit O(flodin) int mais () { Enter the no. of pyceette Scanf (" .1-d", &n);

int processes in burst timing assisted time in priority [n]]; ital (ind is a ; i < n; ital); point ("In links the arrival time for process to", Ital); print ("In links the burst time For process to", Ital); print ("Ind", & burst time For processes (i) - ital); print ("Ital", & priority (i)); priority ("Ital", &
iler (Ind is 0; i < n; itility printf ("In Finder the granival time for process Id", Iti), Scorp ("Id" & arrival time For process Id" Iti); Scorp ("Id" & birist time Fig); process Id" Iti); Scorp ("Id" & priority (i)); process Id" Itili scorp (Id" & priority (Id); process Id (Id);
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Ender the brienty for priocess 1:2 Ender the arrival time for process 2:1 built time is 5:2
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built time "3" priority :3 occevel :3:2
priority :3
11 00-60 Vol 3:2
Pinst.
" priority "

2 Average two margard time: 7.4. Round Robin (Non - Pau- emptite) Hinclude (Stdbool, h) ind twonapoundtime (int polocesses [] int no int toti for (int is a sich i 144) tatlid = btfid + Wtlig;

Bafna Gold -

ind quantum) } Int Dun-b+[m]; For Chat iza vien i ida) oten battiz = battiz; int (= 0; (1) did (1) for (ind i=0; isn i i+t) 5 16 (Olem - b+[i]>0) dono = fall; (sien betti) > quantum + + = quantum; Dem_ bt[i] -= quontum; 0151 Dem- bt[] - 0 - temo by eak; eledunn 1 IndayTima int byccesses[] [h] total-wit F Lada - tad = 0,

Waitingati 19.0 quantitos) 4 quantitos) y time (perocesses, n. bt. hy tat); "In h Paroceases Itit Purst Time 1212 Waiting twinational twoms (n");

fer (int 1=0 i i ch itt);

tota, wt = total, wt + wtri); total-tet = total-tet + taki itl. bt [i], ht[i], ht[i], tad[i]; orint ("In Average prairing time" orindfl"In Arestage twomagound times 1.f" (float) total- tot / (float) 1) Justun I: int main() int n. bylocesses (n], burst-time Alind 10 Enter the no- of Scan (".1.d". 8n); Scall" Fater the quantum;

1ht 1=0;
- 1ht 1:0; - fox (1=0; 1ch; 1+d) of
print ["In Enter the poloceas:"); Sconf ("Y.d", & poloceas exti);
of the policies of ig);
printy (" Enter the Bwist time");
2 cond (" 1d" 2 Brount - 7 in, [17):
time (, quantum);
time (guantum);
- Olterno:
Outpudts
Enter the no. of Polocean: 3 Enter quantum: 2
Enter quantum: 2
PBT
2 7
PID BT P WT TAT
1 5 7 12
2 3 8 15
3 3 8 11
Arg WT = 7-667 Arg TAT = 12-667

int id: ind burst-time: Float porionity; int num of baracesses. ind execution-time[max. PROCESSI, PROLESSI, DROCESSI, Dumain - time [MINX PROCESS], deadling [MAX_PROCESS], dunain deadline IMAX - PROCESS Void get bylocess - info (int selected -algo) &
prohit ("Ender total no. ob polocess
(maximum 'I'd):", MAX-PROCESS sconf ("1.d", & num of pages"); it (num of Larger (1) &

exit(0): i=a; ichum-af-poloxons: 14 brind ("In POLOCEAR Idln", i+1); brind ("==> Execution time: "); Scan ("I.d", & execution time! (Selected) algo == 2) & max (int a, int b, ind c) BLOX: scetwin max and absenvation time lint selected.

if (selected - abgo = = 1) } oletwin max(period [0], Period[] Period [2]); ed-algo sectuair maxCalcolline[0], deal , deadling [2]) gold print schooled Cint polocety Scheduling : hha) (PSPOCESS- list []]=: i11) brull " Hereit),

prindle void state manatonic (ind time) { ind belocess list[100]= fog. min = 999, mext-polocess to; Float utilization - a For (int is a i corum of processity) utilization += ((1.0 + executiontime [i] / period [i] &; num-of-poloceda, (18at) 9 - (1) utilization >m) & print ["In aiven Poloblem is not edulable under the sais Scheduling algerithm for (ind iso il (time itt) for (int) : oi j < num-of il (910 may - +1 my [] 20) min - Percollin; - RADO Cd - +x31

of Coumain-time [next. kyocexi) = of

pyocexs. List [i) = next. byocexi

purmoun -time [next-byocexi
] for (ind KEO ; IC & num- o) · Stex == elg (K+4) ((i+1)·1. Period [x]: Icemain time[k] = 0 ing [K]; Mext- polocopo - K rint-Schodello (Pyccess. listition earliest deadling first time) à Float utilization = for (int 1:0; i < num - o 1+4) utilization += (1.0 * execution time deadling [i]; Int n= num-of-pgocesses; int byocean [num. o int max-deadling cubujent by oceas min-deadling pyocess-plistitions bood is secondy [num of proceation for Chair

Bafna Gold 144) \$ 18-210ady = 19(11); Polocean digritt; max- deadline - deadline [a]: ster (int is a i i < hum-of-process) if (deadling [i] > max-deadling) for (intito i i corum of proceasi 1+1) For intigiting is numa - Dyceas is adeadline [1hd temp = execution-time execution timetil: executi timu. Ci +timeTij = +comp. execution_ - deadlin [j) deadling cadline b- 2 porocean 1 - paragetil 0910xce88[1]

Moute a c program to simulate onusilevel que schedelines algorithm dis - no the following sometion mil on Polocesses of system toto are diling into The categories - system percent and user parocesses, system parious and user processes.

Our to be given higher priority

Than users Processes.

Use FCFS Scheduling for the Process in each quelle. Minclude estation thincludo (Stallib.h) beganoled tomets int auxival time, bugult time, miorie waiting time, two partound time. Void FCFS (Storuct Potocess + queur, ind n) gg 1 hd 1, j; Struct Process tempi For (indich : ith) { if (queus [i]. asylival time > greenet j2. asolival. time) of temp = queue [i]: geleine tida que ceotidi queueci)= temp;



int moin () { Stoluct Poloce88 * 818tem-queur. * user-quous: int system nea , user neo: Flood angewaiting time o. aver tutnayound timeso; brindf (" Enter the 010. of polocesson:") Scart ("101", 8n); System-queup: (Statuct pascess); malloc user-queen = (Stoluct Polocexx*) maller Ch * 81200 (Stouct Potoceas)); for (i=o; icn ittl) 9 sessoled formets printfil" Enter over ival time built dine. and printy (0-syptem (1-uper) for potocess ! A: " + i+1); for (is a jish i itt) } It such process Pi scan find old to 8 "I'd I of". & P. arrivel-time. & P. burist time . & P. Priority P. Waiting time = 0; P. turnagaund time soi 16(p.poriority==0) { System aller Buston ptd 7= P:

Lime & Sypin

Rafmi Colif

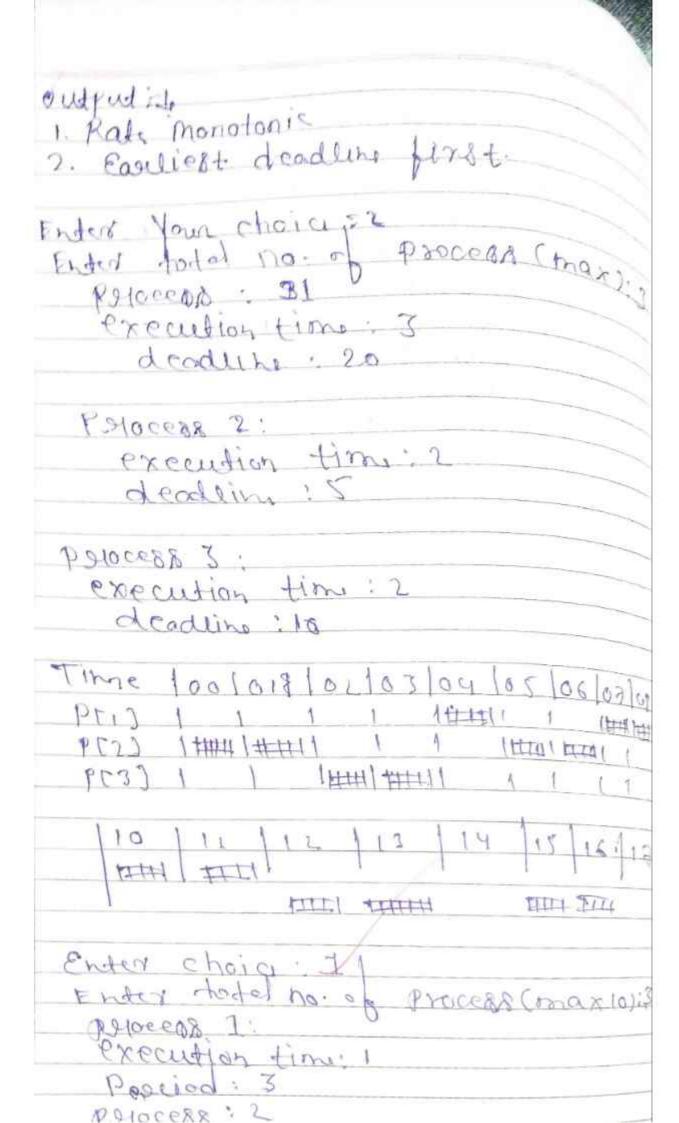
Work a C Potogran, 10 simulate potocluce . A - consumer Potablen using semaylong #instudy Cstdiob # include < Stdlib.h) int mutex: 1, full o, empty: 3, 7:0; int main() int ni void Polodycer (): void Consumers): ind wait (int); int signal (int); printfl" In1. Poloducer In2. consumed (n3 · tex 1+1); While pound ("In Enter your chaice:") Scan ("1.d" 2n) quitch (n) } casel: if ((mutex==1)88 (empty! bola of u cent (). mind (" Buffer is 6.01 POTE + cases: 1 ((mutex==1)92 (ful)=0)) consumer () 5813 printfol" Buffer is empty!!"); bareak;

Cakes exit(a)

byrak; Jutwh 0: int wait (int s) signal (int s) sproducer C muter = wait (mutex). In Poloducer Poloduces = signal (mutex Go haumed! mutex = wait (mutex). ull = worst (full): = signal (embty): in consumer I time 1.d", 11 mutex = Signed (mutex): U



ob 1. Potoducer 2.	consumer zexit
Ender Chairs!	
Poloducer poloduces	item 1
Potadercer potaderces	item L
Ender choice: 1 Poloducer Poloduces	item 3.
Enter choice: 1 Buffer 's fell	
Enter Choia: 2	
consumer consume	& item J.
	A N
4.5	
	4 1 1 1
(i)	
	1 × 1



execution time! persod . U Process 3: Execution time: 2 Period: 8 Time 00 01 02 03 04 05 06 07 P[1] +# ## -1111 1111 Woulte a Gpologram to simulate the concept of Dining-Philosophers problem Hinclude C Stdiah) # include pthoroad. D #include (semaphover.h) Holofing NIS to define TENAMICANIC 2 # depih HUNGRY! # deping [EFT (i+4)]. N Holepin RICHT (iti)1. W ird State (N): int Philton = 20,1,2,0146 sem it mudex; yew-f sins: Void test tintili

Bafna Gold

Void take- Fork (intil Schrwait (2 mutex); State [i]: HUNGRY; printflighilogopher tol is Hungryth" Sem-post (2 mutex); sem wait (951i); Sleeber roid pud-fork (indid brind 1" Philosophor- La Proffin void * Philosophes (void + num)of while (1) ind ri= num; Bleeballi Lake Jerk (is); Sleep (o); tut fork (*i): ind main () { Pthread t thread-id[n1]: gen, init (2 mutex, 0,1); for (iso; ich; ita) Jen - init (25012,0,0); pethoread-corecte (8 throad idti), MULL, Philogopher, 2 phillip. prinds "Philosopher . I.d 18 thinking for (i=0; i<N; id+) of

pethread - join (of bread - idfi). NULL) nedfed ? Thilogopher is of hinking is calino

Woute a C paggran, to simulate Bankers algorithm for the Puripose of deadlock avoidance H include < Stolio. h) int main () 1nt h, o), 1, 1, k) printf ("Enter the no. of Poloceases:");
Scant (".1.d", 2h);
printf ("Enters the no. of stegources:"); Scar 1". 1.d", 2011; int allocation IEm]; prindl" Enter the allocation madrix: In"); for (1:0; icn; itt) = For (1=0, i) (m; j++). Scanf [". I.d", & allocation [i][j]) ind max [n][m]: brind (" Enter the MAX madrix: In"). For (isosianii++) S For Circii (nij++) 5 Sconf ("Id" & max [i][i] available [m]i rindfl" Enter the available Resources: (icosikh jitt) 2 Constitution & amilablitis.

[n], ans [n], ind need [n][m]; (jegjjemij++) of i I Test - alla cartion in necollistis max! KCn j ktt) of a iscmissed Flag 21; by car; Flag=20) = allocation tiry f[i]= 1

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.ck detection to simulate dead Hinchude (Stdio. b) Stadic int mark[20]; int int main() int allog [10] [10], orequest [10][10], Scon [".1.da & DP); Deloces :"); printel" Enter no. of stesources. "In Scanf ("1.d" 2 nd). drintf(" In Total Amount of the Resounce & conf ("1-1.d", 8 8 (1)); printfl" In Enter the sequest matrix!

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louk a C perogram to simulate the tollowing condiguous memory allecation MORSE-Tit Best- Fit - Tirst- tit Hingludy (Stalian) # define max 25 Void firstfit (int bl), ind ab , ind fl) int na); - Void worstfit (int bl.), int nbe), ind fill ind not! void bestfit (int bl), int nb, int fl) ind ne); & main() int bemars, example thi privation memory management Schemashi Sconf (" 1.d" & sp); pocint (" Enter the no. of files: ") Scarl (" 11 d" 851): pound[" Ender the size of the blocks: Ih") for (indications inter Scart (" Black "Lot" i);

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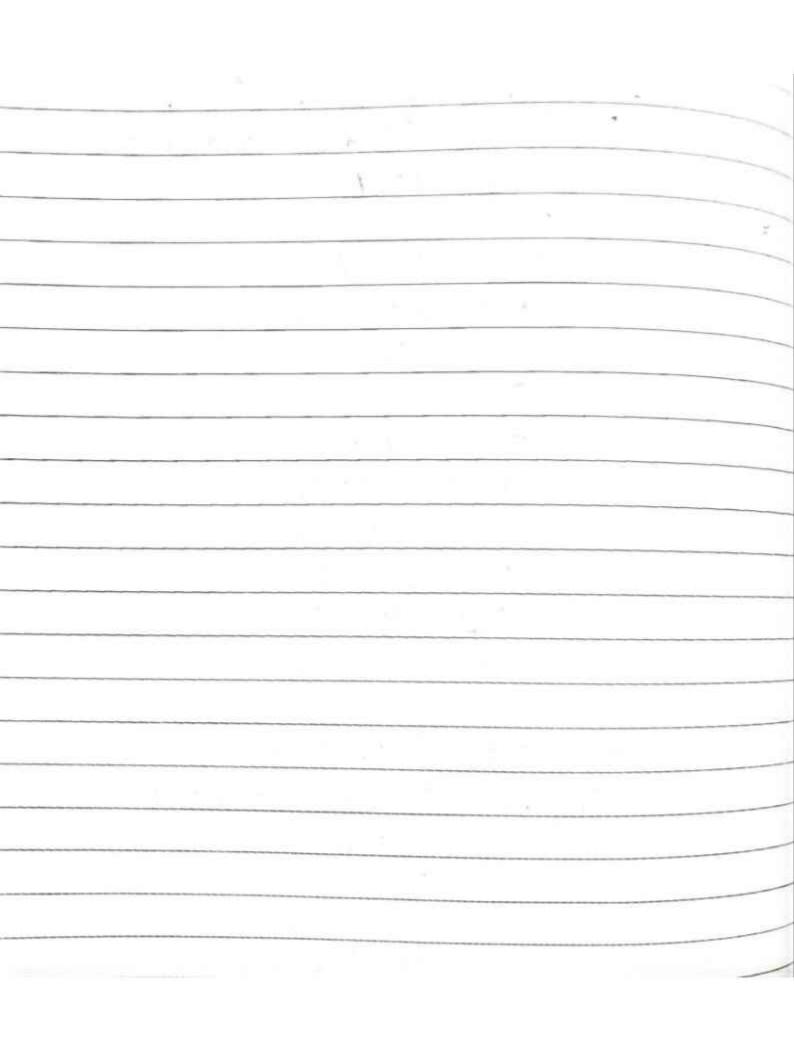
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