

Insplement en Java, the old knapsack eperlum wing Dynamic Programming method p6 a) emport Java atil+ public elais prapiaen public vord some (Prass wt, Prass val, Praw, end n) f Prot P, g; Prd soll [] = new Prt [n+1] [W+1]; for (9=0) [2= 12; 1++) 6 for (p=0) 9 == 1 9++) 1 ug (9==019==0) trop isolipited =0) Ene & (wice)>g) Sollej[j] = Solle-j[j] gricultus Storic Vild mai milling Sollej (f) = mathimax (bolli-1)(j)), y y (sol [1º-1] [g-wt[P]+ val[P])); System-out plenden (" The optemel solution w; "+ solenjewj) PNLIJ selected = new ene(N+1) for (i=o) P < N+1; i++) selected [e]=0)

en; g-w; / from last person while (\$ >0 ff \$ >0) 2 (collestes = 101 censes) &
selected (2) = 1; J= J-wcPJ; Hemain Coparty 1--

System out println(" in grems selected: "); pol ( =1; ecn+1; i++)

ey(selected [] == 1)

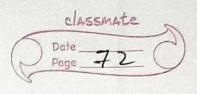
Syntem-out-print (P+" ")

public static void main (String[) augs)

(1907W) DO ONS

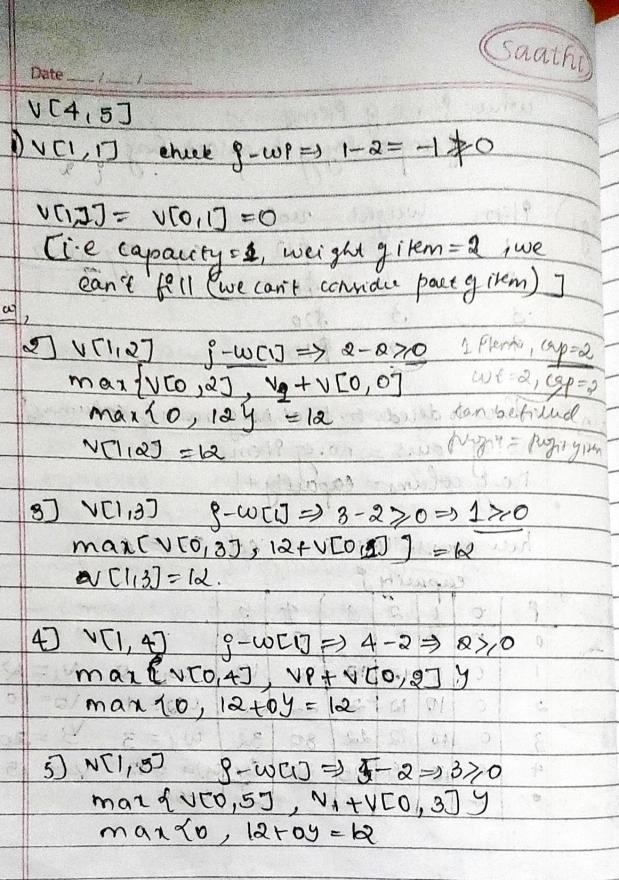
Scannel en = new Scanne ( Sy tem-In) knapsack ks = new knapsack ();

Supremous println(" Enturo-g Elements: "); Pot n= &n. nouhally Praco wt = new enachto; PMI val= new PMINTY



by ten.out. privile ("In Enter the weights:") f& (1 nd 1=1;1 (=n;1++) w(1)=4n.next(2) System-out peinten ("In Erice Knapiack weight:") Prot W= Pn-neward() Syptem-out-plint ln (" Ente values: "); folint = (it+) VCiJ=in-nextlata) Ms-solu (wt, val, win); yy Output: Enter number g Elements Entu weights 2 1 3 2 Enter brapiack weight Entre values 12 10 20 15 The optimel solution wi : 37 Hems selected:

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4		(2)	2	- \$	15	300	1 (Sun 74 / Su	
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How to decide on total no grows & columns?								
np. of rows - no. of 91 ems +1 =								
no- g colums = capacity +1								
6. 0 - 3 - 5 - 8 C 13 W - 9 [0:1] (8								
hu jours= 4+1=5 col=3+1=600								
orrowd temparity is capacity y bag =0 can't hill anything								
9	0		2	3	14	5		
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$\widehat{i}$		Marine Service Service Co.		12.	12	12	WI BONNIER	
2	0	10	12	22		22	wa = 10 m va = 10	
3	0	10	12	22	80	32	$w_1 = 3  3 = 20$	
4	0	10	15	25	30		WA = 2 VA= 5	
01		E		14.	Vs .		WE FOR	
9d = 60 + 8d - 03 × 1010								
				NEW PROPERTY.		Vertilia (Ma		



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= INTQ,D j-W0=1-170=0000 = trul. max[N[1,1], Ne+V[1,0]] marto, 10+0] =10

01/1=1-2 CB187VC mar [VEII2], V2+EVEIZI] max [12,10+0]=12

3) V[213] 3-1=270 maz[V[1,3], N2+V[12]] 7 mar[12, 10+ 12] = mar[12, 22] =20

47 V[2,4] 4-1=3>001 - 1,871 max [V[1,4], 10+N[13]] = man [12,10+12] = 22 DX 1 = 6 = 5 (2 +) V (0

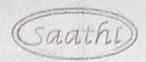
5) V[2,5] 5-1=4700, (C. 6) 1) 10001 max[V[1,5] = 10+V[1,4]] = max[12)10+10] = 22

1048=81-3=-2401 7 17 11 [3,1] VCQ, U=1001/+Wellordirdran 86 for 171 US 1 1000

2) V[3,2) &-3=-17/0 V[2,2] = 12 ( ) ( ) ( ) ( ) ( )

U BLOCK THE STUDY COED "HOW 3) VC3, 8) = 3-3=0>0

( saathi Date \_\_\_\_ MANENCO, 87, VS+VER,60) max[22, 20+0]-22 319 10/01/09 118/11 Q) V[3,4] 4-3=170 max EUER, 47, V3+VER, [] max ( 22, 20+ 10) +30 11/11/11/11 \$1 - (0101, 01 1 Part 5) V(3,5) 5-3=270 max [ U [215] 9 V3+V[2,2]] mar[ 22, 20+12] = 32 the translation of the folice of the second ⇒ 0 V[4,0 1-w4=1-2=-1>0 1 C3 (1) = 10 (1) E 11 - P (2) (1) (1) con administration and the contraction of the contr Q] V[4,2] 2-2=070 mar (VC3,27, V2+VC3,07) 18,570/8 mar[12] 15+0]=15 3) VE413) 3-2=1701 01874616 mar [VES, 8], Vy+VES, i] mar [ 22, 15+10] = 25 \* 4) VE4, 4) 4-27, Q > (2, 4) V (4) mar[V[3,4], V4+V[3,2]]=V[30, 15+12]=8 Page No.



DV[4, 6] 5-2=370 max[U[3,6)+V4+V[3,3])/ max[32, 15+22] = 32

Date \_\_/\_/\_

(b) Now thick if 32 (item 3 can huxelected)

total cap=5, item 4 = 2

rem. cap=5-2=3

Now thick col. 3 of row3 (prev. row of item 4)

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Now as in compand with V[213] = 22

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22 El 2 au de feunt. I ten 2 is selected

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*	Teme longslixity & O(moule)
	Teme longslixity & O(moule)  n=no.gitems  w= kneplack capacity
	ue - kneplack capacity