Algo: (Jarvis-March approach)
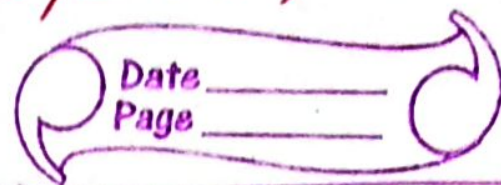
```
CH (Points, n)
{ if (n<3) return;
  l=0;
  for (i=1 to n-1)
  { if (Points[i].x < Points[l].x)
       l=i;
  }
  P=l, q;
  do
  {  hull= hull ∪ {Points[P]};
     q= (P+1)%n

     for (i=0; i<n; i++)
     { if (D(Points[P],Points[i],Points[q])
          <0)
       {
          q=i;
       }
     }
     P=q;
  } while (P != l);
}
```
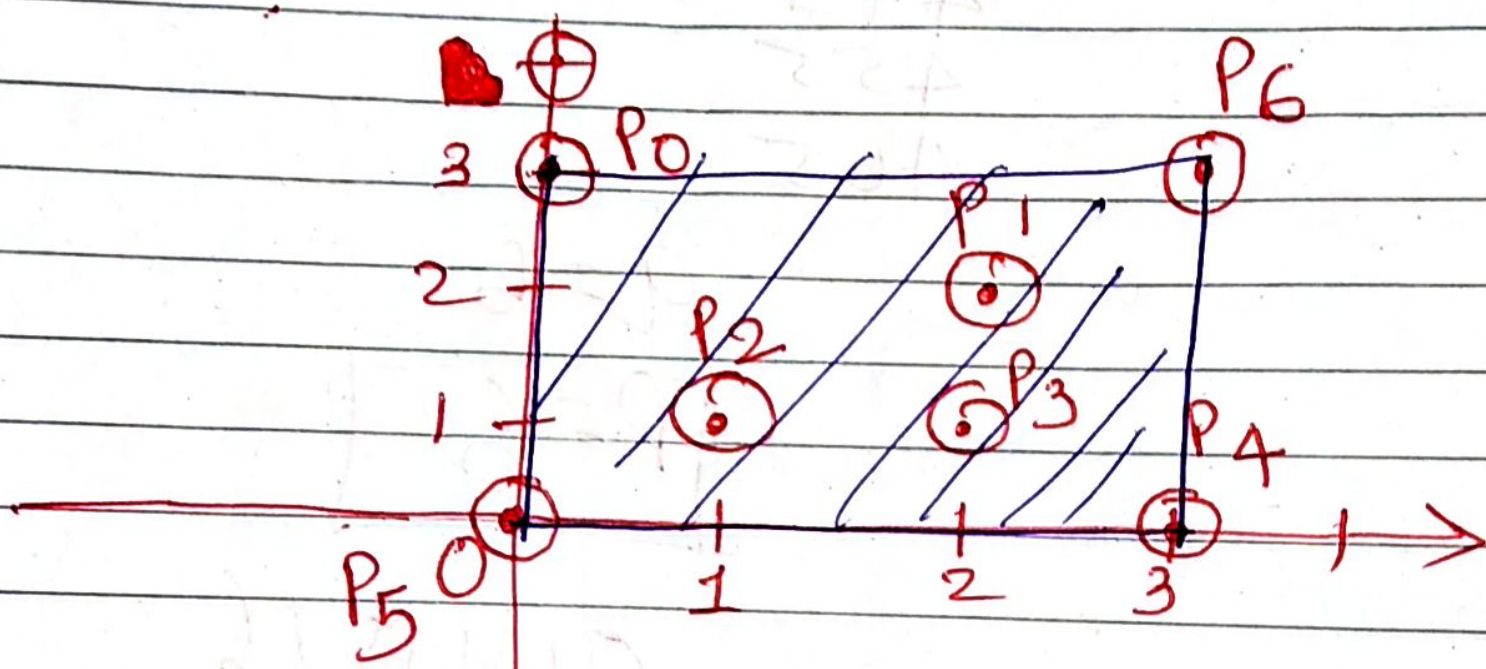
D=Direction

Running Time: $O(nh)$

★ Points[ ] = {(0,3), (2,2), (1,1), (2,1), (3,0), (0,0), (3,3)}

$P_0 = (0,3)$

Apply Jarvis March

Ans: $P_0 = (0,3)$ (Leftmost Point i.e. With Min. X Co-ordinate

Ex

Points [ ] = { (0,3), (2,2), (1,1), (2,1), (3,0), (0,0),

(3,3) }

Apply Jarvis Masch an find Conver Hull.

Ans: $n = 7$, $l = 0$,

↳ Index of left most point from the Points [ ]

It.1 $P = 0$, $q = 1$

hull = { (0,3) }

P	i	q	Direction (P, i, q)
0	0	1	0
0	1	1	0
0	2	1	< 0 ⇒ q = 2
0	3	2	> 0
0	4	2	> 0
0	5	2	< 0 ⇒ q = 5
0	6	5	≯ 0 ~~⇒ q~~

∴ $P = 5$

$P \neq l$

It.2 $P = 5$, $q = 6$

hull = { (0,3), (0,0) }

P	i	q	Direction (P, i, q)
5	0	6	> 0
5	1	6	= 0
5	2	6	= 0
5	3	6	< 0 ⇒ q = 3
5	4	3	< 0 ⇒ q = 4
5	5	4	= 0
5	6	4	> 0

∴ $P = 4$, $P \neq l$

It.3   P = 4,   q = 5
        hull = $\{(0,3),(0,0),(3,0)\}$

P	i	q	Direction (P,i,q)
4	0	5	$<0 \Rightarrow q=0$
4	1	0	$<0 \Rightarrow q=1$
4	2	1	>0
4	3	1	≥ 0
4	4	1	$=0$
4	5	1	>0
4	6	1	$<0 \Rightarrow \boxed{q=6}$

∴ P = 6,   6 ≠ 0 i.e. P ≠ l.

It.4   P = 6,   q = 7 % 7 = 0
        hull = $\{(0,3),(0,0),(3,0),(3,3)\}$

P	i	q	Direction (P,i,q)
6	0	0	0
6	1	0	>0
6	2	0	>0
6	3	0	>0
6	4	0	>0
6	5	0	>0
6	6	0	$=0$

∴ $\boxed{q=0}$

∴ $\boxed{P=0}$ 0 === 0 i.e. P == l

⇩

Terminate

∴ CH = $\{(0,3),(0,0),(3,0),(3,3)\}$