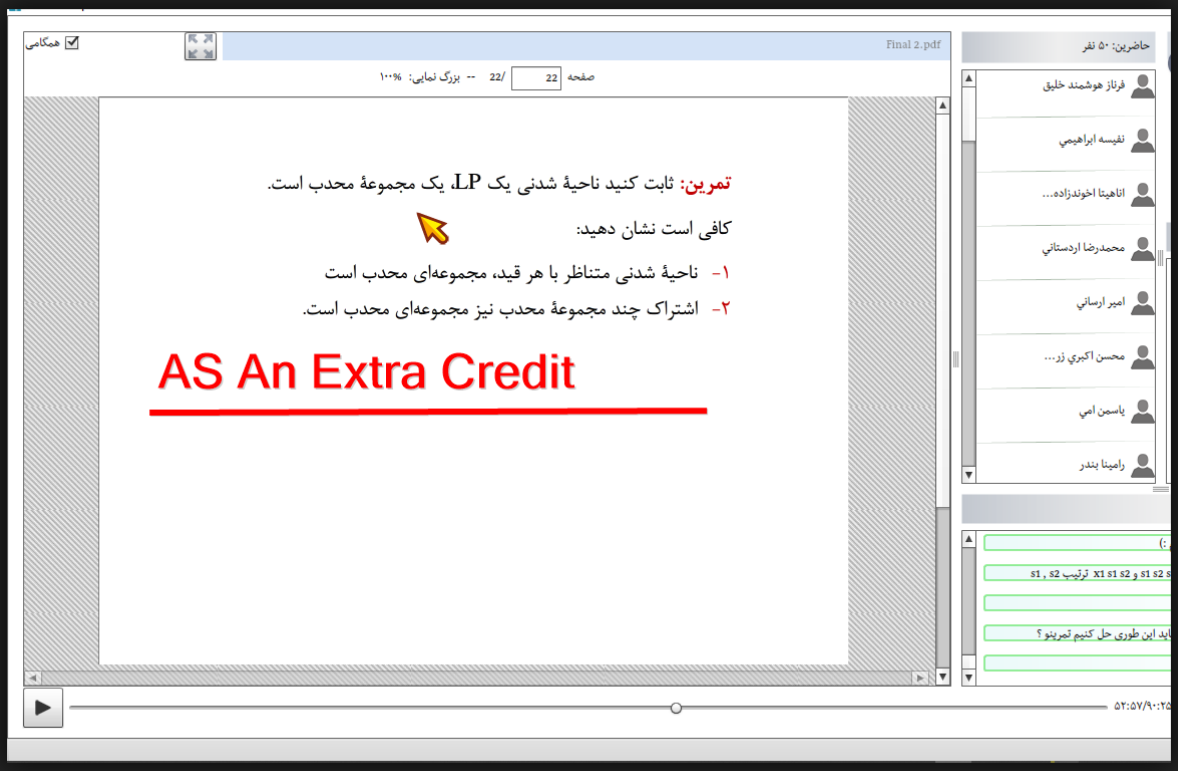

Frist we define convex set:
A set S is said to be convex if for any two points X1 , X2 in S, the line segment joining these points is contained in S.
In logical notaion:
Set S is convex if For each X1,X2 element of S & t element of [0,1], tX1+ (1-t)X2 be also an element of S.

Second part:
We know that we can show any Linear programming problem in the following form:
S={ x ∈ R^n ; Ax<= b , x>=0}
So, now we just need to show S is a convex set.
Suppose p1 and p2 be an element of S and t ∈[0,1].
we'll show " t*P1 + (1-t)*P2" is also belong to S.
Because both P1 & P2 are element of S:
@ AP1 <= b , AP2<=b
@@ P1>=0 , P2>=0

1* A(t*P1 + (1-t)*P2) = t*AP1 + (1-t)AP2 <= tb + (1-t)b = b (base on @)
2* tP1 +(1-t)P2 >= 0 (because t ∈[0,1] and @@)

1* & 2* Shows that feasible area of any l.p.p is convex set ●

Kind Regards
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