

Assignment -1 Q2

Let us consider an example , let say there are 3 students X, Y, Z and there are only three schools A,B,C each having only one seat available.

The original or honest preference of X,Y,Z is given below in the table.

X	Y	Z
A	B	B
B	C	A
C	A	C

Now without loss of generalisation suppose the following order is allotted to students,

X - 3

Y - 1

Z - 2

Now from the above mentioned order and mechanism discussed in the question X end up getting A , Y gets B and Z gets C as an outcome.

Now if Z does not fill it's honest preference but instead he/she fills the following sequence.

(X,Y - honest and Z - dishonest)

X	Y	Z
A	B	A
B	C	B
C	A	C

Now from the above mentioned order and mechanism discussed in the question X end up getting C , Y gets B and Z gets A as an outcome.

If we compare both the result, in the second result Z gets B which is his/her second preference but in first case he/she getting C it's third preference, therefore in this case one can say honesty is not best policy so this is not **Strategyproof.**

In the first case X gets his/her 1 preference whereas Z end up getting 3 and in second case Z gets 2 but X gets his/her last preference. So one can say one's better off is another's worse off. Therefore no one can become better without worsening the result of others and hence it is pareto optimal.

I don't think this mechanism affects everyone equally, clearly those who fill the less choice are harmed the most. Look at following case,

X	Y	Z
A	B	B
B	C	A
C	A	

Keeping the same allotted order as mentioned earlier. In this case Z end up getting nothing. So the person who fill the less number of choices is harmed most.

Therefore one should fill more number of choices and at the same time candidate must fill some non-popular options on top which are still better than the worst option to minimise the loss.