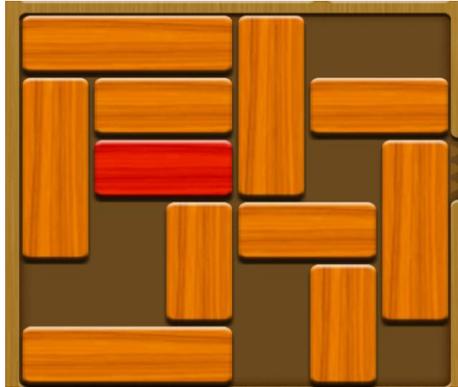


# PROJECT REPORT

## *PRISON BREAK*



### **Intoduction**

The main goal of PRISON BREAK is to move the PRISONER out of the Prison through the hole shown by the arrow

One has to move the BLOCKERS to achieve the goal.

The vertical BLOCKERS can move vertically only & same applies for the horizontal BLOCKERS.

<b>Sr.no</b>	<b>Important terms</b>	<b>Defination</b>
1.	Prisoner	Red Block
2.	Blocker	Yellow coloured blocks
3.	Prison	Square shaped boundary

### **Problem**

- We were in a dilemma whether to have PRE-DEFINED LEVELS or AUTO-GENERATED RANDOM LEVELS.
- After a brief discussion with our TA,we decided upon the latter.
- So,we divided the team into two for:
  - 1.USER INTERFACE : Shreerang Kaore , Nitin Chaudhary;
  - 2.AUTO-GENERATION OF LEVELS: Pratik Babhulkar , Amit Patil.

## **Solution**

- The algorithm for the auto-generation was difficult. So we all discussed the same & came with a solution:
  - We WOULD first randomly arrange the BLOCKERS & the PRISONER.
  - Then we would solve the game.
  - Depending upon the minimum number of moves required to solve a randomly generated level & the number of BLOCKERS, the difficulty level would be generated.
  - We decided to run the code for this algorithm in the future & save the level number that was generated using the code.

## **About the Game**

- We decided to have 100 levels in this game.
- We also decided to include various themes that would change the colour of the BLOCKERS, background (not that of the PRISONER), etc.
- We have learnt about the graphics related to the game i.e. to create, move, select a rectangle until now.
- If time permits, we may complicate the game by including two PRISONERS (one horizontal & other vertical) & two likewise HOLES.

## **Constraints**

- Other than the number of steps required & the number of blocks, the difficulty level may depend on other factors. So, the level number generated may not always satisfy its difficulty level.
- Due to random generation of levels, the program may take some time to load. So we may decide to save the level number earlier.
- However, we may make some changes to speed up the game.

## **Teamwork**

- Pratik Babhulkar wrote the algorithm & was assisted his Amit Patil.
- Shreerang kaore wrote the Draft User Manual,Project report & was assisted by Nitin Choudhary
- Everyone contibuted equally towards the documentation of SRS file.

## **Time**

<b>Sr No.</b>	<b>Name</b>	<b>Roll No.</b>	<b>No. of hours</b>
1	Pratik BAbhulkar	140100013	12
2	Shreerang Kaore	140100028	9
3	Amit Patil	140100043	6
4	Nitin Choudhary	140100048	5