LAB-2 REPORT
GROUP: 2

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1. Domain Description

State Space: Our Implementation accepts the states as tuple (x, y, label) for each block in the state. For example: (1, 2, C)

Start Node and End Node: Check input.txt for initial node and goal.txt for final node. Below is the graphical representation of the initial and final nodes.

F		
B	A	
E	D	C

Table 1. Initial State

B	C
D	F
A	E

Table 2. Final State

MOVEGEN Algorithm: We are using 3 stack to find the next generations. First, we will convert our state representation into the *stacks* (x will be stack number, y will be index of block in that stack and label will be the representation), then the top element of non empty stack is moved to other stacks. It gives us all the possible next states. Now each possible state is converted back to tuple representation from stack representation. We are using *Hill Climb(**Greedy**)* approach to find the solution using one of the four heuristics:

- Manhattam Distance Heuristic
- XNOR Heuristic
- XNOR-height Heuristic
- ASCII-Code Heuristic

GOALTEST Algorithm: It is just a simple comparision test, simple compairing given_state and goal_state.

2. Heuristic Functions Considered

3. Hill Climbing

Saksham you will have to read this,,, If you are a true lober then you will confess your true lobe for her,,,,

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