DOCUMENTATION

MODULE ELEVATOR-ALGORITHM:

INPUTS:

1)req\_floor: The floor which user intends to go.

2)clk: It is used to introduce time delay.

3)weight: The total weight of people inside the lift.

OUTPUTS:

1)direction: The current direction of movement of the lift.

2)complete: Used to indicate status of the lift.

3)over\_weight: Used to indicate whether lift is overweight or not.

4)out\_floor: The current floor at which lift is present in.

5)turnover: The total number of movements made by lift.

DESCRIPTION:

The lift moves according to conventional way. Only after completing all the requests in one direction, will the lift go in the opposite direction.

MODULE SHORT-DISTANCE-ALGORITHM:

INPUTS:

1)req\_floor: The floor which user intends to go.

2)clk: It is used to introduce time delay.

3)weight: The total weight of people inside the lift.

OUTPUTS:

1)direction: The current direction of movement of the lift.

2)complete: Used to indicate status of the lift.

3)over\_weight: Used to indicate whether lift is overweight or not.

4)out\_floor: The current floor at which lift is present in.

5)turnover: The total number of movements made by lift.

DESCRIPTION:

The lift always goes to the closest requested floor. It will always take the shortest path.

MODULE POWERSAVINGMOTOR:

INPUTS:

1)weight: The total weight of people inside the lift.

OUTPUTS:

1)powerlevel: The level of power of the lift.

DESCRIPTION:

This module decides what power level the lift should work in, according to total weight of people inside the lift, and thereby increasing the power efficiency of the lift.

MODULE FANRPM\_CONTROL:

INPUTS:

1)fan\_speed: The level of speed of the fan.

OUTPUTS:

1)rpm: Revolutions/minute of the fan.

DESCRIPTION:

This module controls the rpm of the fun, according to the fan speed. The fan speed is determined by the temperature inside the lift. The temperature is given as input by TMP36 IC.

MODULE TEMPERATURE\_CONTROLLED\_FAN:

INPUTS:

1)temperature\_input: The current temperature inside the lift.

OUTPUTS:

2)fan\_speed: The level of speed of the fan.

3)fan\_rpm: Revolutions/minute of the fan.

DESCRIPTION:

This module controls the fan speed of the lift, according to the temperature inside the lift.

MODULE MAIN:

INPUTS:

1)req\_floor : The floor which user intends to go.

2)clk: It is used to introduce time delay.

3)weight: The total weight of people inside the lift.

4)temperature\_input: The current temperature inside the lift.

OUTPUTS:

1)fan\_speed: The level of speed of the fan.

2)fan\_rpm: Revolutions/minute of the fan.

3)powerlevel: The level of power of the lift.

4)turnover1: The total number of movements made by lift according to algorithm 1.

5)turnover2: The total number of movements made by lift according to algorithm 2.

6)direction1: The current direction of movement of the lift according to algorithm 1.

7)direction2: The current direction of movement of the lift according to algorithm 2.

8)complete1: Used to indicate status of lift 1.

9)complete2: Used to indicate status of lift 2.

10)over\_weight1: Used to indicate whether lift 1 is overweight or not.

11)over\_weight2: Used to indicate whether lift 2 is overweight or not.

12)out\_floor1: The current floor at which lift 1 is present in.

13)out\_floor2: The current floor at which lift 2 is present in.

DESCRIPTION:

The main module calls all the other modules. It calls both the algorithms for the same set of inputs and displays the turnover (number of movements made by the elevator) for both the algorithms, thereby enabling us to directly compare and characterise the efficiency of both the algorithms.