AI: H.O1

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# Implementation

### A-1: Is a list of lists which contains shifts of (all) days

### A-2: is actually a solusion to the problem

### A-3: should at last satsfy these needs:

### Limitations for each doctor in each shift should be satisfied

### No doctor should work 3 night-shifts in a row

### no doctor should be put in a circumstance that has to work night-noon-afternoon shifts in a row

### limitation for all shifts for all days of a doctor should be satisfied

### B-1: is a list of choromosoms

### B-2: The best choromosom of final generation should at last satsfy these needs:

### Limitations for each doctor in each shift should be satisfied

### No doctor should work 3 night-shifts in a row

### no doctor should be put in a circumstance that has to work night-noon-afternoon shifts in a row

### limitation for all shifts for all days of a doctor should be satisfied

### c-1: at first, A generation will be generated randomly.

### c-2: That generaton will be ranked through Fitness function.

### c-3:

### if the best choromosom had the satisfaction we would consider it as the solution and it is done

### If Not, we would straightly deliver 16% of most powerful choromosoms to the next generation and Crossover the rest with and Mutate them with probability, and consider their childeren a replacement with them in the next generation and it continues till satisfaction

### c-3-1: Cross Over Algorithm: crosses between all shift

### Meaning that we used points

### using flip the coin algorith it just selects each shift of the 2 choromosom

### c-3-1: Mutate: Randomly changes 2 shifts