**INPUT Format:** Input format of the schedule is pipe separated line having three value in specified order as follows:

**EVENT\_NAME|EVENT\_RECURRENCE|EVENT\_BOUND**

Now ever element in above pipe separated values have following structure:

**EVENT\_NAME:** It is the first element in the pipe separated values. It has simple string representing the name of the schedule. That is, anniversary, sprint meeting etc.

**EVENT\_RECURRENCE:** It is the second element in the pipe separated values. It represents the structure of the schedule recurrence. Based on the type of recurrence, it can have following formats:

1. **YEARLY RECURRENCE:** It contains # separated values of following format wherein both the # separated values have a single occurrence.

**Y:<Frequency>#MM1:DD1,DD2**

**OR**

**Y:<Frequency#MM3:DAY1,DAY2:ORDINAL1,ORDINAL2**

**Examples:**

**//Every year 3 and 23 of JUN**

**Y:1#06:3,23**

**//Every year 3 and 23 of JUN & 6 of NOV**

**Y:1#05:3,23#11:6**

**//Every year second Monday & Tuesday of JUNE**

**Y:1#06:MON,TUE:2**

**//Every year first and third Monday of APRIL**

**Y:1#04:MON:1,3**

**//Every alternate year 3 and 23 of May & 3 and 23 of JUN**

**Y:2#05:3,23#06:3,23**

1. **MONTHLY RECURRENCE:** It contains # separated values of one of the following two formats wherein both the # separated values have a single occurrence.

**M:<Frequency>#DD1,DD2**

**OR**

**M:<Frequency>#DAY1,DAY2:ORDINAL1,ORDINAL2**

**Examples:**

**//Every Month on dates 3 and 23**

**M:1#3,23**

**//Every Month second Monday & Tuesday**

**M:1#MON,TUE:2**

**//Every alternate month second & fourth Saturday**

**M:2#SAT:2,4**

1. **WEEKLY RECURRENCE:** It contains “#” separated values of following format wherein both the # separated values have a single occurrence.

**W:<Frequency>#DAY1,DAY2**

**Examples:**

**//Every week Monday & Tuesday**

**W:1#MON,TUE**

**//Every alternate week Monday**

**W:2#MON**

1. **DAILY RECURRENCE:** It contains “:” separated values of following format.

**D:<Frequency>**

**Examples:**

**//Jogging Daily**

**D:1**

**//Non-Veg every alternate day.**

**D:2**

1. **ONCE IN A PERIOD RECURRENCE:** It contains “#” separated values of following format wherein both the # separated values have a single occurrence.

**O:<Frequency>#Q:DD**

**OR**

**O:<Frequency>#M:DD:NoOfMonth**

**Examples:**

**// Once in 2 months on 10th**

**O:1#M:10:2**

**// Once in 2 months on 10th**

**O:1#M:10:2**

**// Once in a quarter on 10th**

**O:1#Q:10**

**// Once in 5 months on 10th**

**O:1#M:10:5**

1. **NO RECURRENCE:** It contains # separated values of one of the following two formats wherein both the # separated values have a single occurrence.

**N#YYYY:MM:DD**

**OR**

**N#YYYY:MM:DAY:ORDINAL**

**Examples:**

**//2nd Dec 2017 we have a school reunion**

**N#2017:12:02**

**//2nd SAT in Dec 2017 we have a school reunion**

**N#2017:12:MON:2**

**EVENT\_BOUND:** It is the third element in the pipe separated values. It represents the schedule boundaries. It can have following formats:

**S:YYYY-MM-DD#E:YYYY-MM-DD**

**OR**

**S:YYYY-MM-DD#O:NoOfOccur**

**OR**

**S:YYYY-MM-DD**

**OR**

**O:NoOfOccur**

**OR**

**E:YYYY-MM-DD**

**Examples:**

**//From 2019:03:13 to 2021:06:25**

**S:2019-03-13#E:2021-06-25**

**//50 times from 2019:03:13**

**S:2019-03-13#O:50**

**//From 2019:03:13**

**S:2019-03-13**

**//Till 2021:06:25**

**E:2021-06-25**

**//50 times**

**O:50**

1. Every second Saturday is a holiday.

Every second Saturday of the month is a holiday|M:1#SAT:2|

1. Remind me to pay my phone bill on the 10th of every month.

Monthly phone bill reminder|M:1#10|

1. 2nd Sep is my anniversary.

My Anniverssary|Y:1#09:02|

1. Every Tuesday and Thursday are team catch-up.

Weekly team catch-up|W:1#TUE,THU|

1. Every 1st and 3rd Sunday, I need to visit the hospital.

Monthly hospital visit|M:1#SUN:1,3|

1. 2nd Dec 2019 we have a school reunion. (non-recurrent event)

School reunion|N:2019:12:02|

1. Every alternate Wednesday our sprint ends.

Sprint ends on alternate wednesday|W:2#WED|

1. Once in 2 months, on the 10th I need to pay my credit card bill.

Periodic credit card bill payment|O:2#M:2:10|

1. Once in every quarter, 5th we have shareholders’ meeting.

Quarterly meeting|O:1#Q:5|