CREDIT SUISSE

Is coding part of your DNA?
Register now for CodeIT Suisse

Banking today is a technology business, where digital ingenuity creates competitive advantage. At Credit Suisse, we are committed to delivering world-class technology innovation that enables our clients to reach their goals.

To further build on our award-winning capabilities, we invite you to take part in CodeIT Suisse, a Coding Challenge designed to help you demonstrate your skills, personality and aptitude for technology.

CodeIT Suisse (Part of Credit Suisse Coding Challenge)

Date: September 24 – 26, 2021 (Friday Afternoon to Sunday)

Format: Virtual

Register

Prizes

Winning teams / individuals will be awarded with prizes that are worth of the below values.

	Team	Individual
Champion	SGD 2,200	SGD 700
First Runner Up	SGD 1,400	SGD 450
Second Runner Up	SGD 950	SGD 300

How to apply

1. To participate, you may apply on an individual basis or form a team of 2-3 eligible members.
2. Each participant (team/individual) is required to submit both an application via the Register button above and a solution to the problem statement below on repl.it. Please refer to the Repl.it submission guide in the registration page for instructions.

Entry Challenge

It is the year 2038 and robots have the right to get paid for the work they do. As an employer of robots, you need to calculate how much a robot gets paid for cleaning your apartment.

How much a robot gets paid depends on when you ask the robot to work. After all, during the day the robot can be a little louder and work a bit faster whilst everyone is out of the house, but at night, you will need to turn on the super quiet mode, which takes more effort! Robots also cost a bit more over weekends, due to higher demand.

Your robot rates calculator needs to consider the following:

- A standard minutely rate for weekdays, and an ‘extra’ rate for weekends.
- When rates switches between day and night rates, for a total of four different rates (weekday/weekend + day/night).
- For every eight hours, the robot needs to take an hour of unpaid break (or part thereof) for planned system maintenance.

Implement an application that can take in an input like the example below, and provide an output as shown:

```
{
  "shift": {
    "start": "2038-01-01T20:15:00",
    "end": "2038-01-02T04:15:00"
},
  "roboRate": {
    "standardDay": {
      "start": "07:00:00",
      "end": "23:00:00",
      "value": 20
    },
    "standardNight": {
      "start": "23:00:00",
      "end": "07:00:00",
      "value": 25
    },
    "extraDay": {
      "start": "07:00:00",
      "end": "23:00:00",
      "value": 30
    },
    "extraNight": {
      "start": "23:00:00",
      "end": "07:00:00",
      "value": 35
    }
  }
}
```

Sample output:

```
{ "value": 13725 }
```

Additional test cases for the sample rates above:

Start	End	Expected value
2038-01-01T20:15:00	2038-01-02T08:15:00	19650
2038-01-11T07:00:00	2038-01-17T19:00:00	202200
2038-01-01T20:15:00	2038-01-02T04:16:00	13725
2038-01-01T20:15:00	2038-01-02T05:16:00	13760

The problem statement has not been completely described - you should provide comments on any other assumptions you have made on top of these two:

1. Shift timestamps will be given in ISO format “yyyy-MM-dd’T’hh:mm:ss”, rates in “hh:mm:ss”.
2. Duration boundaries are [inclusive, exclusive), e.g. a shift from 7 am to 11 pm will fit into a single day rate, without incurring a minute of the night rate.

Assessors will be considering code-readability, implementation and assumptions including checks/validations that your application performs. You are allowed to use third-party libraries.

Registration Deadline

September 12, 2021 (Sunday)

Further event details will be sent to successful event applicants. We look forward to your entries.

Connect with us: campus.recruitment-ap@credit-suisse.com

To learn more about the Technology careers at Credit Suisse, please visit here.

Credit Suisse is committed to a professional and inclusive work environment where all individuals are treated with respect and dignity. Credit Suisse is an equal opportunity employer.
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