DoReMi Subscription

## Problem Statement:

**Context**

DoReMi is a streaming app which allows users to listen to music, podcasts and watch videos. They offer different subscription plans for different categories of services. Users can subscribe to any of these plans.

* A user can choose only one plan per category.
* All plans, by default, can only be streamed on one device.

**Music streaming subscription plans**

|  |  |  |
| --- | --- | --- |
| **FREE** | **PERSONAL** | **PREMIUM** |
| 1 month Trial | Rs.100 for 1 month | Rs. 250 for 3 months |

**Video streaming subscription plans**

|  |  |  |
| --- | --- | --- |
| **FREE** | **PERSONAL** | **PREMIUM** |
| 1 month Trial | Rs.200 for 1 month | Rs. 500 for 3 months |

**Podcast streaming subscription plans**

|  |  |  |
| --- | --- | --- |
| **FREE** | **PERSONAL** | **PREMIUM** |
| 1 month Trial | Rs.100 for 1 month | Rs. 300 for 3 months |

**Top Up**

DoReMi allows users to add a top up to increase the number of devices that they can stream to for an additional cost.

* A user can choose only one top up.
* The subscribed top up is applicable for all subscriptions.
* A top up can be added only when a subscription exists.

|  |  |
| --- | --- |
| **FOUR\_DEVICE** | **TEN\_DEVICE** |
| Up to 4 Devices | Up to 10 Devices |
| Total cost: Rs.50 for 1 month | Total cost: Rs.100 for 1 month |

**Renewal Reminder**

Once a user subscribes to a plan, the user needs to be notified 10 days before the plan expires.

**Goal**

Given a date when the subscription starts, your program should print:

* The date on which the reminder should be sent for each subscription category
* The total amount for renewal. Renewal amount is the sum of all the subscription plan amount and top up amount.

💡 Pro tip: Aim to get the Readability and Correctness (I/O) badges - your profile can go forward with most companies with those 2 badges. The rest can be improved upon later!

**Assumptions**

* A user can buy only one category of subscription at a time.
* By default all plans can only be streamed on one device
* A user can buy only one category of top up at a time.
* One top up applies to all the subscriptions being bought.

## Input/output

**Input Commands & Format**

Your program should take as input the start date for subscriptions, subscriptions plans to be added, top up to be added.

**START\_SUBSCRIPTION**DD-MM-YYYY

**ADD\_SUBSCRIPTION**SUBSCRIPTION\_CATEGORY PLAN\_NAME

**ADD\_TOPUP**TOP\_UP\_NAME NO\_OF\_MONTHS

**PRINT\_RENEWAL\_DETAILS**

**Examples:**

**START\_SUBSCRIPTION**20-02-2022

**ADD\_SUBSCRIPTION**MUSIC PERSONAL

**ADD\_SUBSCRIPTION**VIDEO PREMIUM

**ADD\_TOPUP**ADD\_TOPUP

**PRINT\_RENEWAL\_DETAILS**

**Output Commands & Format**

Your program should print the renewal date for each subscription category and the total renewal amount on executing the command PRINT\_RENEWAL\_DETAILS.

**RENEWAL\_REMINDER**SUBSCRIPTION\_CATEGORY DD-MM-YYYY

**RENEWAL\_AMOUNT**AMOUNT

**Examples :**

**RENEWAL\_REMINDER**MUSIC 10-03-2022

**RENEWAL\_REMINDER**VIDEO 10-05-2022

**RENEWAL\_AMOUNT**700

**Sample Input/Output 1**

|  |  |
| --- | --- |
| **INPUT** | **OUTPUT** |
| **START\_SUBSCRIPTION** 20-02-2022  **ADD\_SUBSCRIPTION** MUSIC PERSONAL  **ADD\_SUBSCRIPTION** VIDEO PREMIUM  **ADD\_SUBSCRIPTION** PODCAST FREE  **ADD\_TOPUP** FOUR\_DEVICE 3 **PRINT\_RENEWAL\_DETAILS** | **RENEWAL\_REMINDER** MUSIC 10-03-2022  **RENEWAL\_REMINDER** VIDEO 10-05-2022  **RENEWAL\_REMINDER** PODCAST 10-03-2022  **RENEWAL\_AMOUNT** 750 |

**Explanation**

|  |  |
| --- | --- |
| Music Streaming for 1 Month [Personal plan]  Video Streaming for 3 Month [Premium plan]  Podcast Streaming for 1 Month Trial [Free plan]  FOUR\_DEVICE’s for 3 months (50 X 3)  Total | 100  500  0  150  750 |

**Error Scenarios**

When a user adds the same category of subscription or top up twice or more, error code should be printed. Error code should be printed when the date format is wrong.

**Error Scenarios & Error Codes**

|  |  |
| --- | --- |
| START\_SUBSCRIPTION07-19-2022 | INVALID\_DATE |
| PRINT\_RENEWAL\_DETAILS (when no subscriptions found) | **SUBSCRIPTIONS\_NOT\_FOUND** |
| ADD\_SUBSCRIPTION MUSIC PERSONAL  ADD\_SUBSCRIPTION MUSIC PREMIUM | **ADD\_SUBSCRIPTION\_FAILED** DUPLICATE\_CATEGORY |
| ADD\_TOPUPTEN\_DEVICE 2  ADD\_TOPUPFOUR\_DEVICE 1 | **ADD\_TOPUP\_FAILED** DUPLICATE\_TOPUP |

**Sample Error Input/Output**

|  |  |
| --- | --- |
| **INPUT** | **OUTPUT** |
| **START\_SUBSCRIPTION** 07-01-2022  **ADD\_TOPUP** TEN\_DEVICE 2  **PRINT\_RENEWAL\_DETAILS** | **ADD\_TOPUP\_FAILED** SUBSCRIPTIONS\_NOT\_FOUND  **SUBSCRIPTIONS\_NOT\_FOUND** |