Deloitte Digital Away Day

Deloitte Away Day is a maven project to generate a day program to accommodate a list of activities.

Author

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Tech

Deloitte Away Day uses the following technologies:

- [Java] - Code base language (version 1.8)
- [Spring] - For Dependency Injection (version 4.0)
- [Apache Maven] - Build automation tool (version 3.3.9)
- [junit] - Library for testing (version 4.12)
- [codehaus mojo] - Execute Java app plugin (version 1.6.0)

Installation

Deloitte Away Day generates a day program based in an input file stored in the directory `src\main\resources\input.txt`.

These are the allowed formats for tasks:

Format	example
[task_name] [time_in_minutes]min	Docker master class 60min
[task_name] sprint	Docker master class sprint

Sprint is used for 15 minutes tasks. Find bellow an input example:

Duck Herding 60min
Archery 45min
Learning Magic Tricks 45min
Laser Clay Shooting 60min
Human Table Football 30min

Buggy Driving 30min
Salsa & Pickles sprint
2-wheeled Segways 45min
Viking Axe Throwing 60min
Giant Puzzle Dinosaurs 30min
Giant Digital Graffiti 60min
Cricket 2020 60min
Wine Tasting sprint
Arduino Bonanza 30min
Digital Tresure Hunt 60min
Enigma Challenge 45min
Monti Carlo or Bust 60min
New Zealand Haka 30min
Time Tracker sprint
Indiano Drizzle 45min

Execution

Deloitte Away Day requires Maven v3+ and [Java] v1.8+ to run.

Open a terminal and execute these commands to compile and execute:

```
$ mvn clean install
$ mvn exec:java
```

Output will be shown in the terminal. Find bellow an output example:

Feb 13, 2019 2:33:26 PM
org.springframework.context.support.AbstractApplicationContext
prepareRefresh
INFO: Refreshing
org.springframework.context.annotation.AnnotationConfigApplicationContex
t@4783da3f: startup date [Wed Feb 13 14:33:26 IST 2019]; root of context
hierarchy
Deloitte Digital Away Day:
Team 1:
09:00 am : Duck Herding 60min
10:00 am : Archery 45min
10:45 am : Learning Magic Tricks 45min
11:30 am : Human Table Football 30min
13:00 pm : Viking Axe Throwing 60min

14:00 pm : Giant Digital Graffiti 60min
15:00 pm : Cricket 2020 60min
16:00 pm : Staff Motivation Presentation 60min

Team 2:
09:00 am : Laser Clay Shooting 60min
10:00 am : Buggy Driving 30min
10:30 am : Salsa & Pickles sprint
10:45 am : 2-wheeled Segways 45min
11:30 am : Giant Puzzle Dinosaurs 30min
13:00 pm : Wine Tasting sprint
13:15 pm : Arduino Bonanza 30min
13:45 pm : Digital Tresure Hunt 60min
14:45 pm : Enigma Challenge 45min
15:30 pm : New Zealand Haka 30min
16:00 pm : Staff Motivation Presentation 60min

Feb 13, 2019 2:33:26 PM
org.springframework.context.support.AbstractApplicationContext doClose
INFO: Closing
org.springframework.context.annotation.AnnotationConfigApplicationContex
t@4783da3f: startup date [Wed Feb 13 14:33:26 IST 2019]; root of context
hierarchy

Design

These are the main classes used in this project:

com.digital.awayday.service
DayProgramService: *Class to store a morning ActivityBlock and an evening ExtraTimeBlock. Morning and evening start and finish date can be configured. Methods to include tasks into both blocks are included.*
AwayDayService: *Class to store a list of DayProgram. Morning and evening start and finish time, extra time for evening and number of teams can be configured. Also a method to add a list of tasks is included.*
ActivityBlockService : *Class to handle tasks to their respective slot if there is enough free size*

com.digital.awayday.service

TaskDistributionService : *Class to collect and loop through all tasks and try to fit into slots. Also it will calculate how many teams can be formed in given tasks*

com.digital.awayday.dao

AwayDayDao: *Class to load task from resource.*

com.digital.awayday.model

Task: *Class to store a task data (name, duration). Start time is calculated using a LocalTime.*

ExtraTimeBlock: *ActivityBlock extended class including an extratime. Available size method overwriten to manage extra time.*

com.digital.awayday.file

FileUtil: *Class with a method for reading a list of tasks from a file (specific format).*

com.digital.awayday.exception

AwayDayException: *Returned exception when a functional or execution error occurs*