

1 How to get it up and running

1.1 Run the API

1. Open QuestApi solution
2. Build and run QuestApi project
3. Navigate to <http://localhost:5309/>
4. Test the API:
 - a. ProgressAPI:
 - Enter the data parameters with the following format (as in specification):

```
{
  "PlayerId": "P01",
  "PlayerLevel": 1,
  "ChipAmountBet": 10
}
```
 - Click Post Progress button
 - Status code and response content will be displayed
 - b. StateAPI:
 - Enter PlayerId as parameter
 - Click Get State button
 - Status code and response content will be displayed

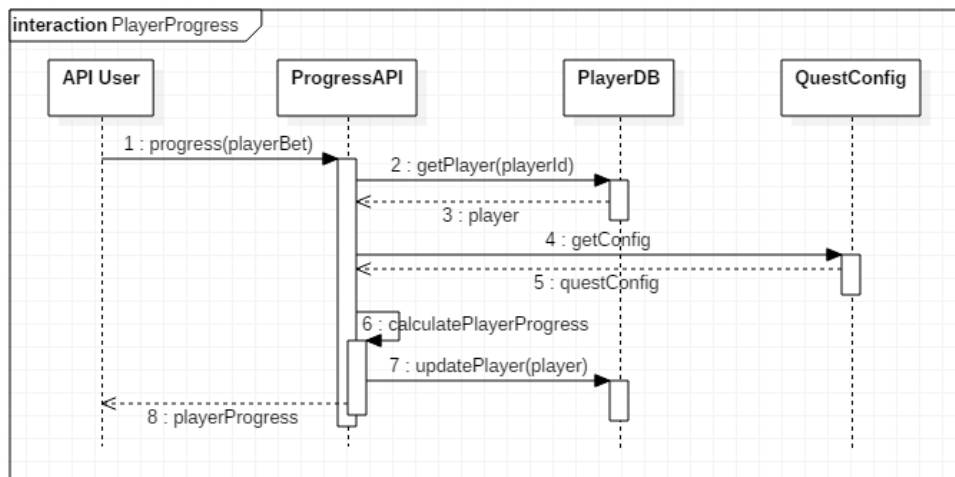
Note: player table has been pre-populated for testing purpose. See Section 4.

1.2 Run Unit Tests

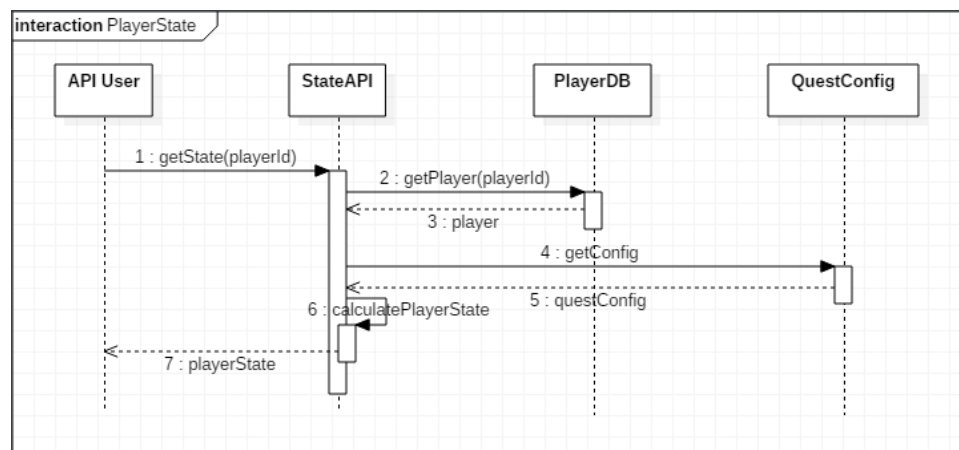
- Open QuestApi solution
- Open test explorer window (**Test** → **Windows** → **Test Explorer**)
- On the test explorer window, click Run All

2 Sequence Diagram

2.1 Player Progress API



2.2 Player State API



3 Quest Configuration JSON

config.json

```
{
  "RateFromBet": 0.3,
  "LevelBonusRate": 0.7,
  "Quest": {
    "Id": "Q01",
    "Title": "Dungeon",
    "QuestPointNeeded": 31
  },
  "Milestones": [
    {
      "Index": 1,
      "TotalQuestPoint": 2,
      "ChipsAwarded": 10
    },
    {
      "Index": 2,
      "TotalQuestPoint": 5,
      "ChipsAwarded": 12
    },
    {
      "Index": 3,
      "TotalQuestPoint": 9,
      "ChipsAwarded": 17
    },
    {
      "Index": 4,
      "TotalQuestPoint": 15,
      "ChipsAwarded": 23
    }
  ]
}
```

Property description:

- **RateFromBet** is needed for quest point formula

- **LevelBonusRate** is needed for quest point formula
- **Quest** represents the currently active quest
 - **Id**
 - **Title**
 - **QuestPointNeeded** is the amount of points needed to complete the quest
- **Milestones** belongs to a quest. A quest has n amount of milestones.
 - **Index**
 - **TotalQuestPoint** is the amount of points needed to complete the milestone
 - **ChipsAwarded** is the amount of chips awarded to player after finishing the milestone

4 Data Model Schema

Player

Id: string (nvarchar)
 QuestId: string (nvarchar)
 MilestoneIndex: int
 QuestPoint: double (float)

Player data for testing purpose:

Id	QuestId	MilestoneIndex	QuestPoint
P01	Q01	0	0
P02	Q01	0	0
P03	Q01	0	0
P04	Q01	0	0
P05	Q01	0	0