Take home task for Senior Software Developer

You have to develop a policy management service. So far we are going to support only policies with monthly payments. This service is in the early stage of development and so far has to cover three main responsibilities:

1. Creation of insurance policy with insured persons
2. Modifying policy by adding and/or removing an insured person to an already existing insurance policy. Modification of already existing insurance persons is not needed.
3. Request insurance policy information on a certain date with its monthly total premium. Each insured person has a name and monthly premium that is provided by an external calculation service.

The service you develop should be production ready with some admissions:

- You can use in-memory mock db
- You don't have to take care about authentication/authorization
- The API calls samples for the endpoints are below:

Policy creation request

```
{
	"startDate": "15.07.2022",
	"insuredPersons": [
		{
			"firstName": "Jane",
			"secondName": "Johnson",
			"premium": 12.90
		},
		{
			"firstName": "Jack",
			"secondName": "Doe",
			"premium": 15.90
		}
	]
}
```

Policy creation response

```
{
	"policyId": "CU423DF89",
	"startDate": "15.07.2022",
	"insuredPersons": [
		{
```

```
                "firstName": "Jane",
                "secondName": "Johnson",
                "premium": 12.90
            },
            {
                "firstName": "Jack",
                "secondName": "Doe",
                "premium": 15.90
            }
        ],
        "totalPremium": 28.80
}
```


Policy modification request


```
{
        "policyId": "CU423DF89",
        "effectiveDate": "12.09.2022",
        "insuredPersons": [
            {
                "firstName": "Jane",
                "secondName": "Johnson",
                "premium": 12.90
            },
            {
                "firstName": "Will",
                "secondName": "Smith",
                "premium": 12.90
            }
        ]
}
```


Policy modification response


```
{
        "policyId": "CU423DF89",
        "effectiveDate": "12.09.2022",
        "insuredPersons": [
            {
                "firstName": "Jane",
                "secondName": "Johnson",
                "premium": 12.90
```

```
            },
            {
                  "firstName": "Will",
                  "secondName": "Smith",
                  "premium": 12.90
            }
      ]
      "totalPremium": 25.80
}
```

Policy information request

```
{
      "policyId": "CU423DF89",
      "requestDate": "03.08.2022"
}
```

Policy information response

```
{
      "policyId": "CU423DF89",
      "requestDate": "03.08.2022",
      "insuredPersons": [
            {
                  "firstName": "Jane",
                  "secondName": "Johnson",
                  "premium": 12.90
            },
            {
                  "firstName": "Jack",
                  "secondName": "Doe",
                  "premium": 15.90
            }
      ],
      "totalPremium": 28.80
}
```

It is preferable to use kotlin as programming language, but if you want, you can use java as well. You are free to chose any framework you are familiar with.

Happy coding!