KAZAKH BRITISH TECHNICAL UNIVERSITY

Health Care systems using machine learning algorithms

Done by: Alimbayeva Z.K.

Supervisor: Yakunin K.O.

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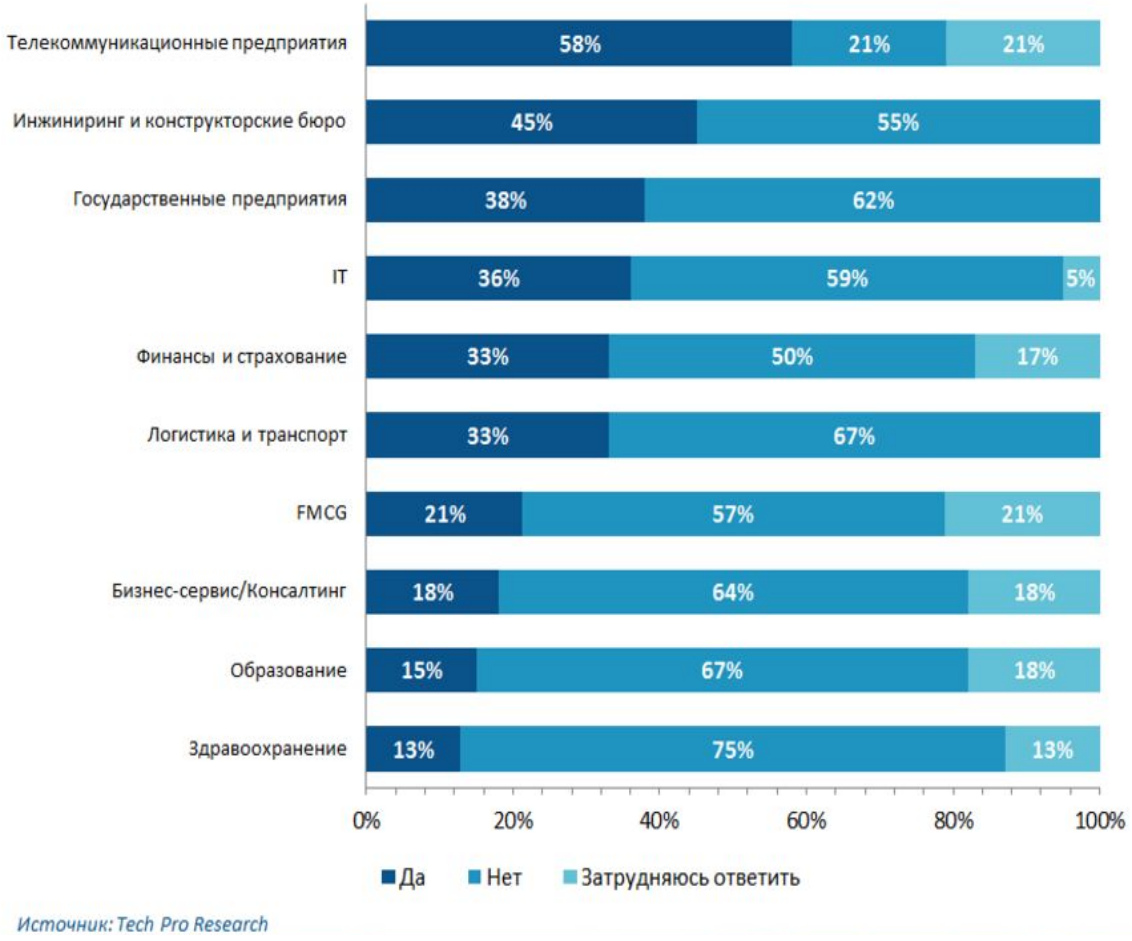
General description of the project



Goal: Development of client-server application which is intended for health care.

Objectives: Create a MVP of project as client-server application on Django and IOS platform.

The societal vision: Creation of a application that will help in monitoring of well-being a person and give a predict value about personal data.

Solved problems: Storage, access and visualization of medical data, and analysis and design of expert recommendation systems for decision making using machine learning algorithms and time series analysis.

HealthAgent

Human resource:

-Team member:

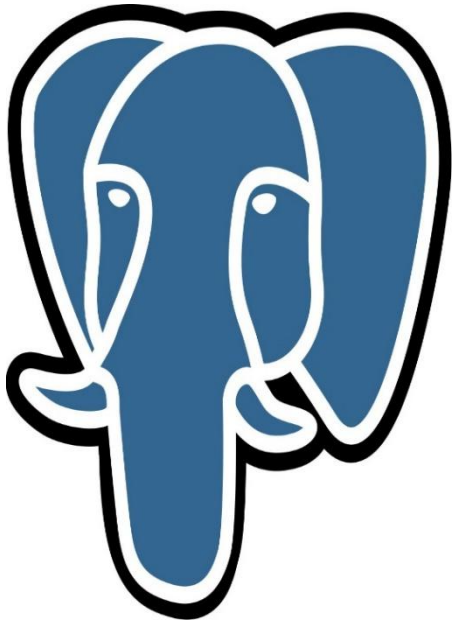
Kazhenbayeva Gulnaz(IOS-developer)

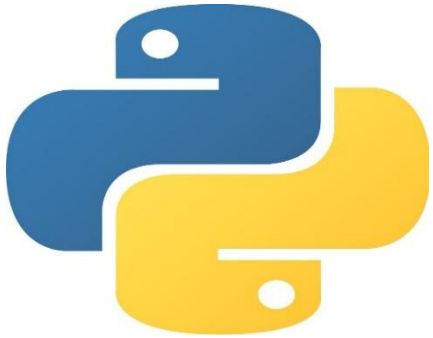
Alimbayeva Zarina(back-end developer)

-***mentors***:

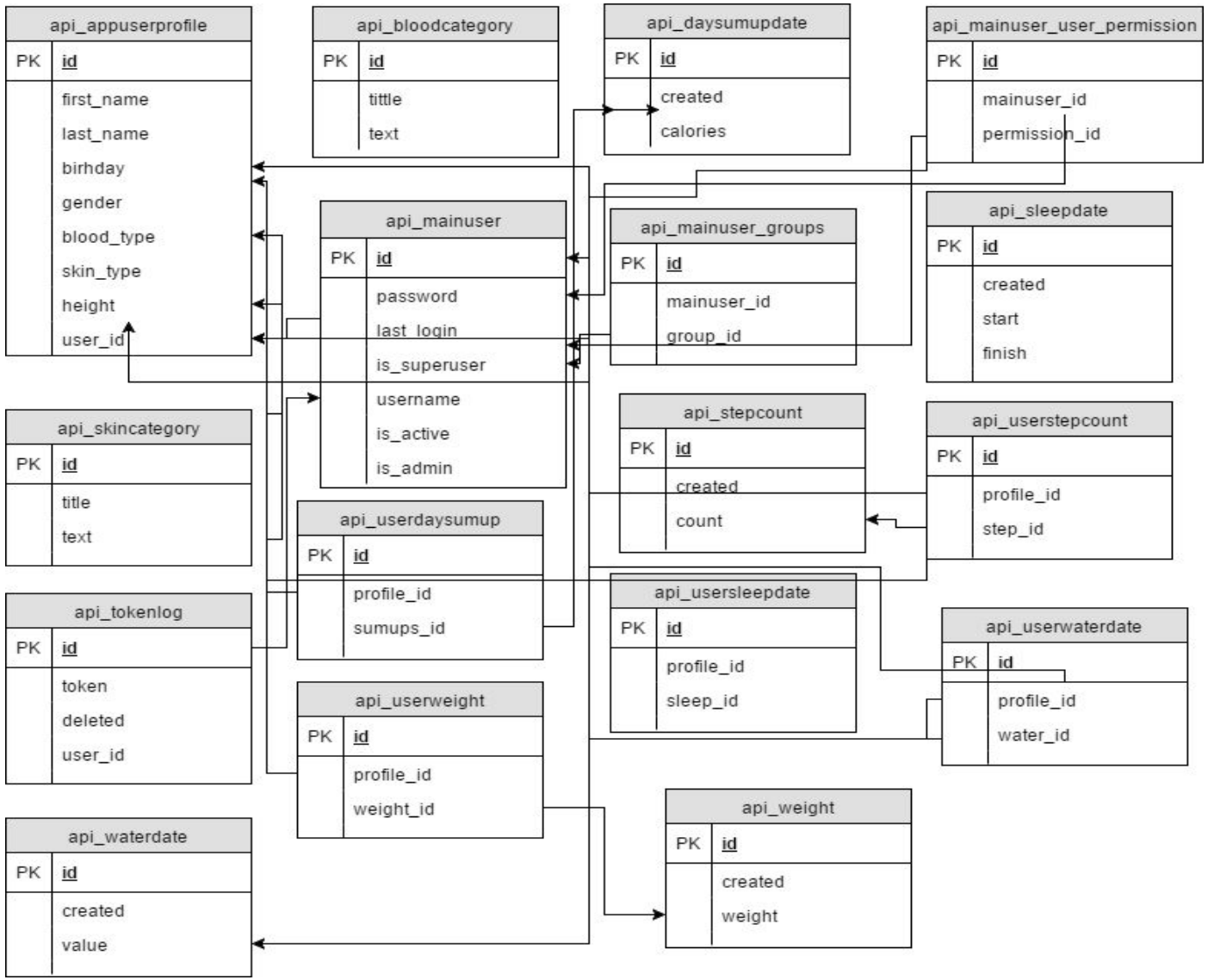
KBTU teachers

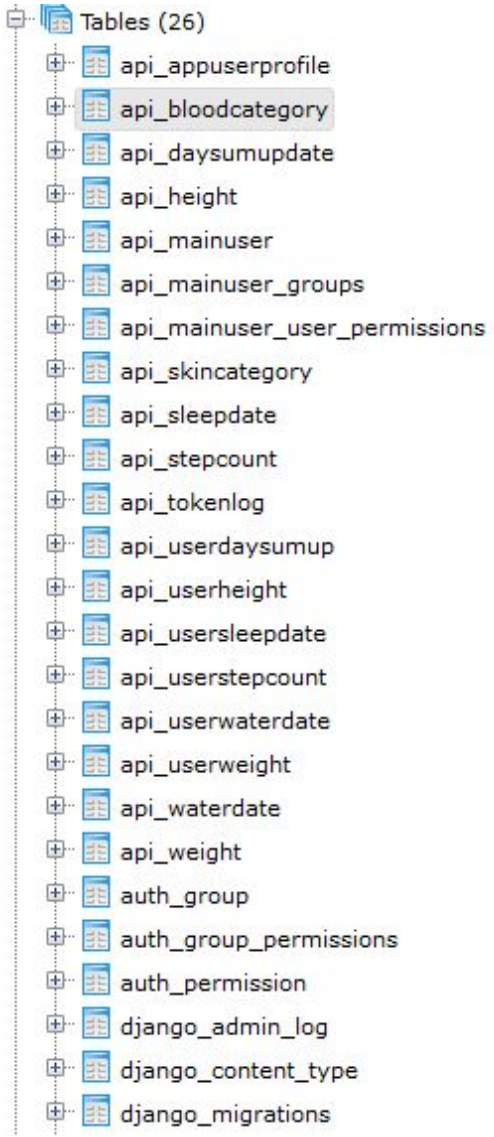
Used technologies





Implementation of web-API





```python
class UserStepCount(models.Model):
    """
    """
    profile = models.ForeignKey(AppUserProfile, blank=False, related_name='steps')
    steps = models.ForeignKey(settings.STEP_MODEL, blank=False)

    class Meta:
        unique_together = ('profile', 'steps')
        verbose_name_plural = "Шаги пользователя"

    def __unicode__(self):
        return self.steps
            "first_name": self.first_name,
            "last_name": self.last_name,
            "birthday": self.birthday,
            "gender": self.gender,
            "blood_type":self.blood_type,
            "skin_type":self.skin_type,
            "height": self.height
            #"languages": [l.full() for l in self.languages.filter(is_active=True)]
        }
```

Django REST framework

Api Root / Weight List

Weight List

OPTIONS GET

```
GET /api/weights/
```

```
HTTP 200 OK
Allow: GET, POST, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

[]
```

Raw data | HTML form

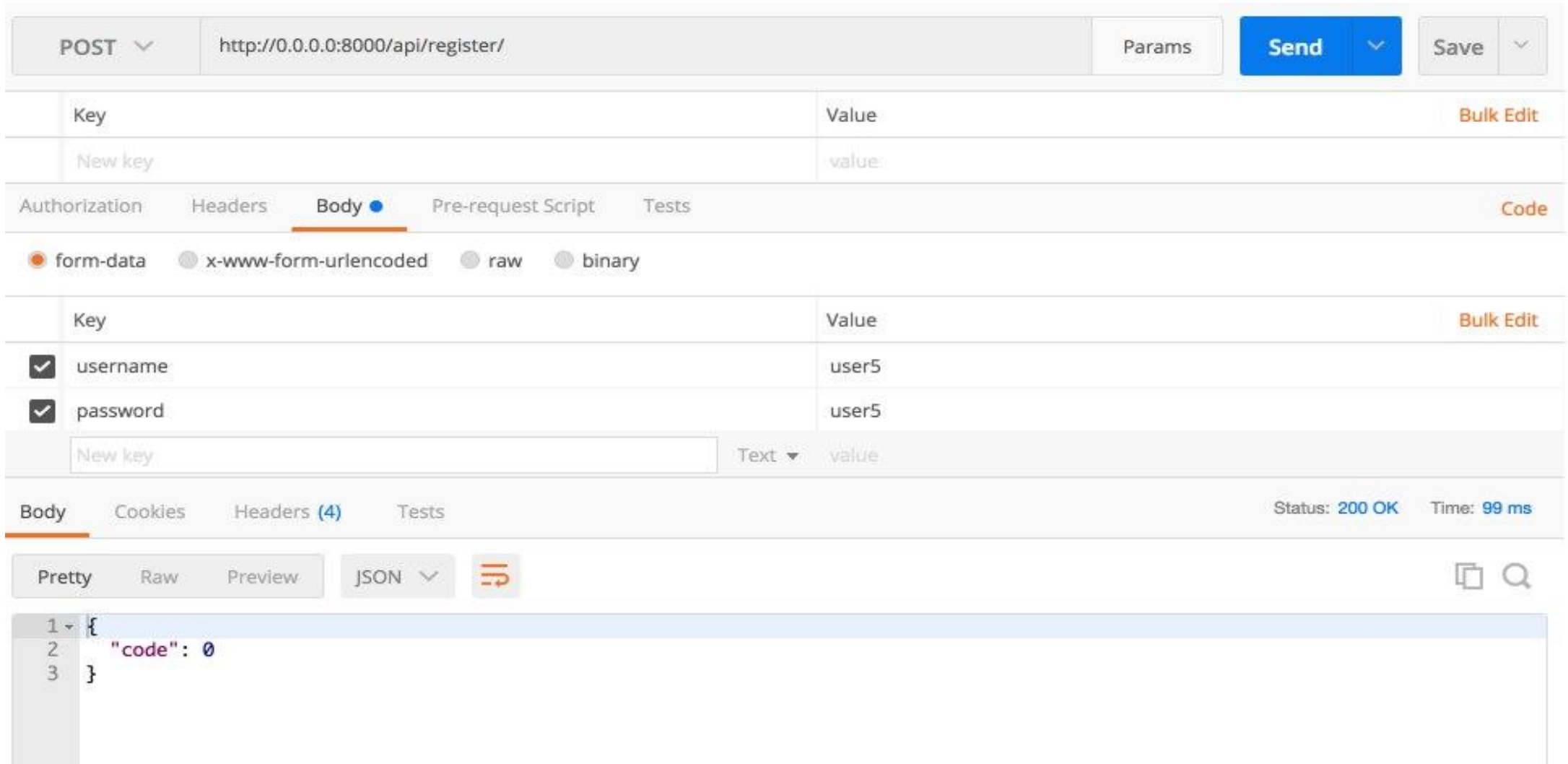
User

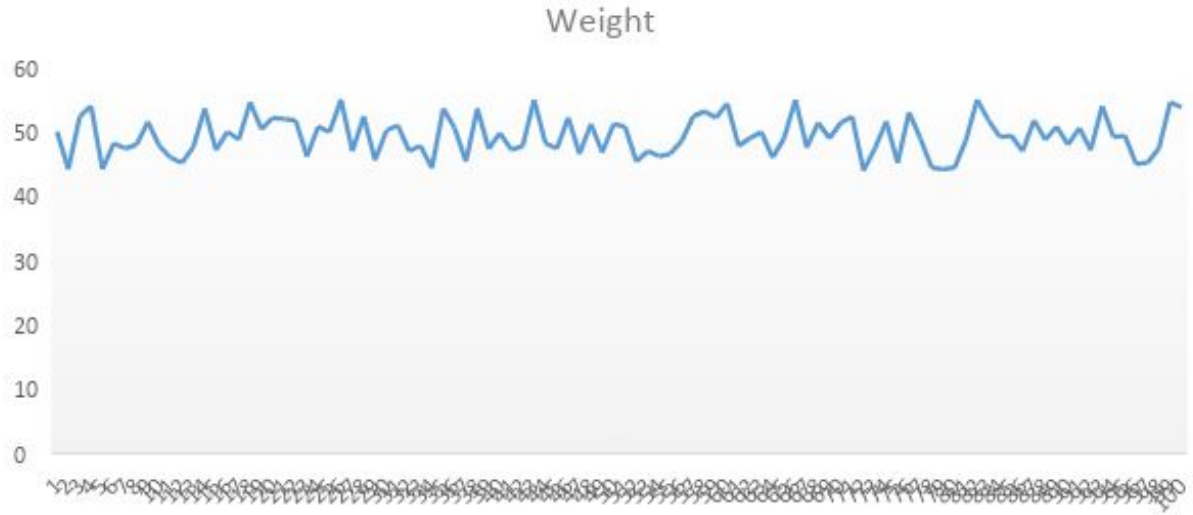
CreatedDate дд.мм.гггг

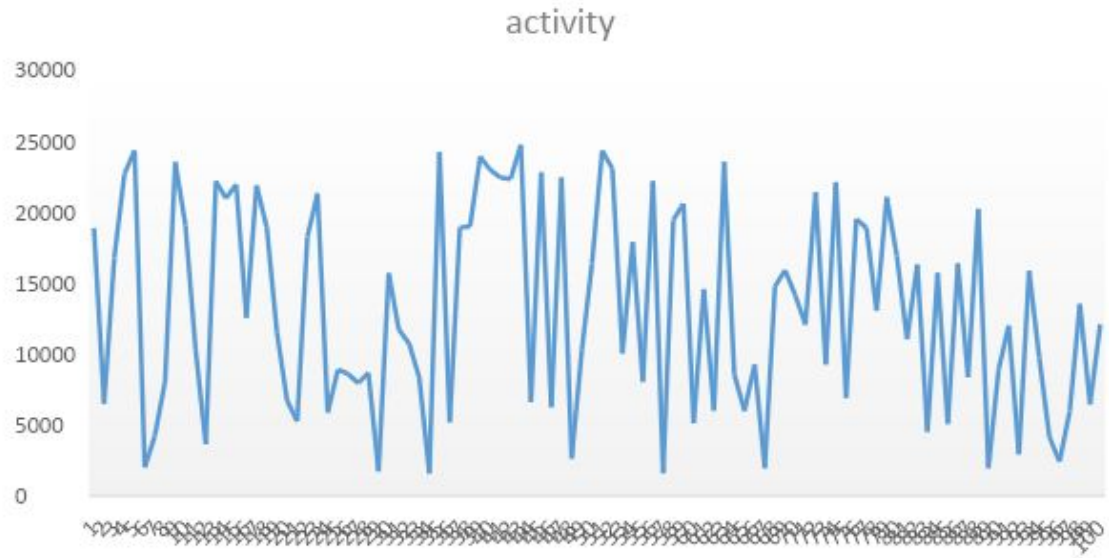
Weight

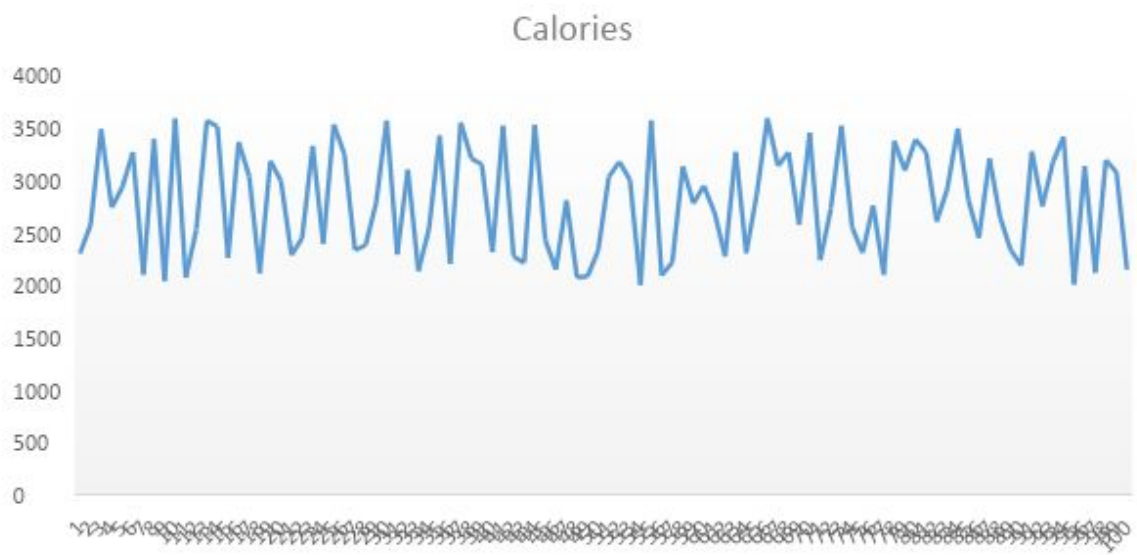
Bmi

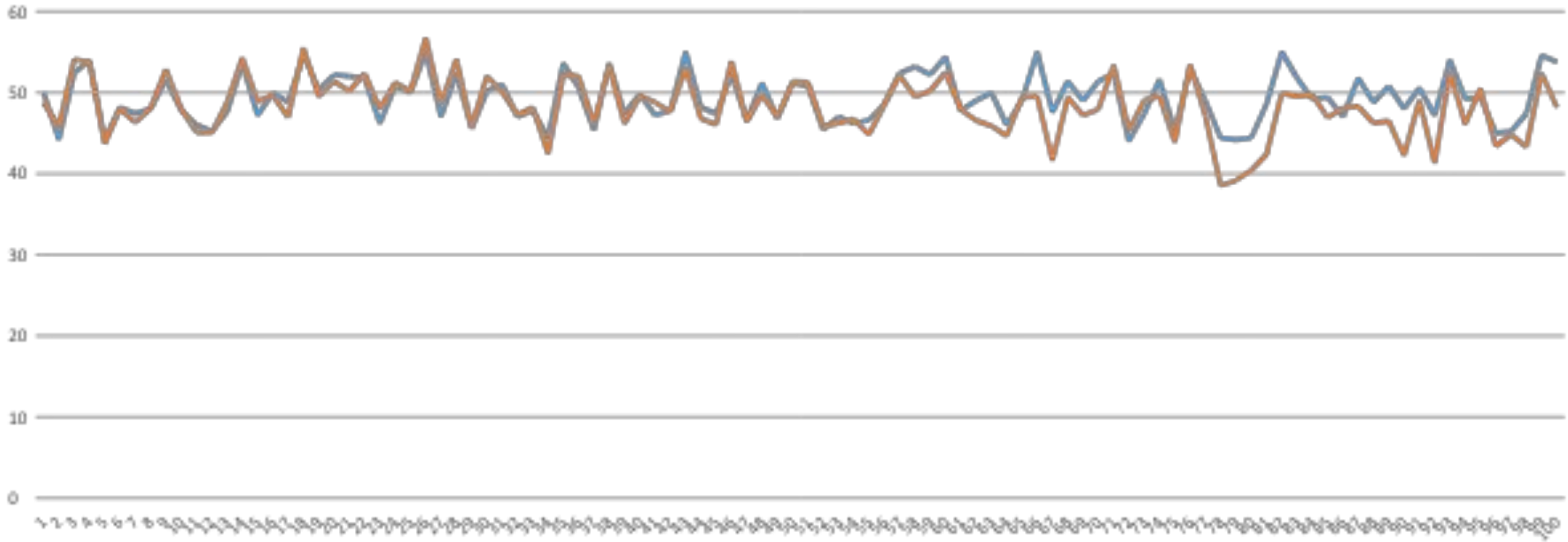
POST


POST
http://0.0.0.0:8000/api/register/
Params
Send
Save
Key
Value
Bulk Edit
New key
value
Authorization
Headers
Body
Pre-request Script
Tests
Code
form-data
x-www-form-urlencoded
raw
binary
Key
Value
Bulk Edit
username
user5
password
user5
New key
Text
value
Body
Cookies
Headers (4)
Tests
Status: 200 OK
Time: 99 ms
Pretty
Raw
Preview
JSON
1 {
2 "code": 0
3 }


Weight
60
50
40
30
20
10
0

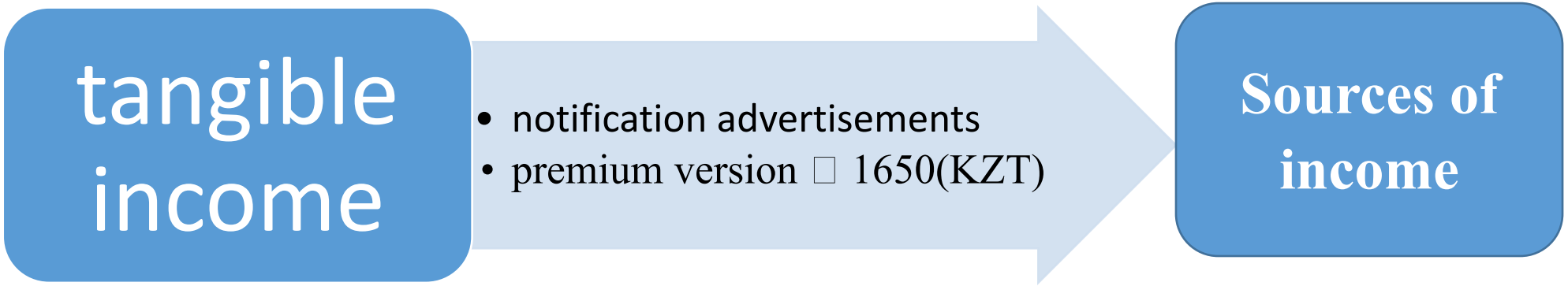

activity
30000
25000
20000
15000
10000
5000
0


Calories
4000
3500
3000
2500
2000
1500
1000
500
0


60
50
40
30
20
10
0

Economic estimations

Profitability Index	1.43
Revenue	8 136 000 (KZT)
Payback Period	0.7
Profit	2 443 640 (KZT)
Cost	5 692 360 (KZT)



Success criteria

- ✔ Profitability Index = 43%
- ✔ In market has no competitors
- ✔ Has a big opportunities for changing health care sphere
- ✔ Originality and relevance in today
- ✔ Users get a motivation lead a healthy lifestyle

Thank you for a attention!!!