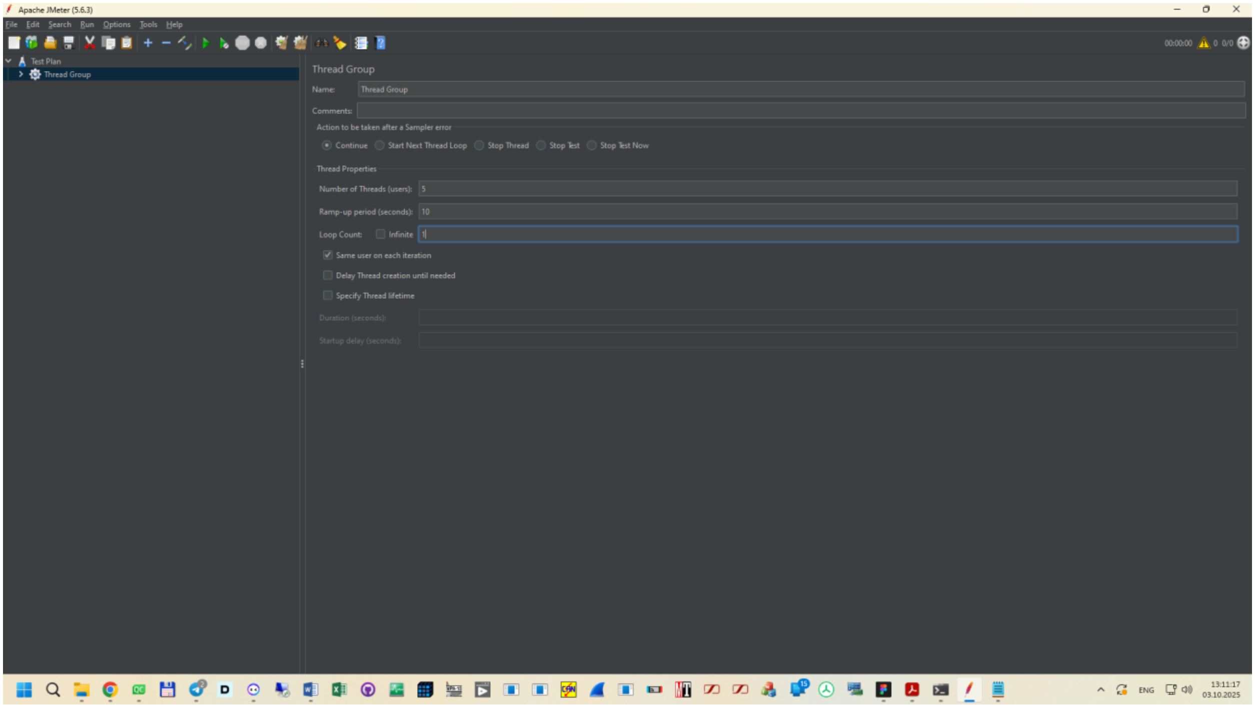
Лабораторная работа №5 Работа с Apache Jmeter

```
from fastapi import FastAPI, HTTPException
from pydantic import BaseModel
from typing import List
import sqlite3

app = FastAPI()

# Database setup
db_path = r'C:\ПО\auction.db'

def init_db():
    conn = sqlite3.connect(db_path)
    cursor = conn.cursor()
    cursor.execute('''
        CREATE TABLE IF NOT EXISTS items (
            id INTEGER PRIMARY KEY AUTOINCREMENT,
            name TEXT NOT NULL,
            description TEXT,
            price REAL NOT NULL
        )
    ''')
    conn.commit()
    conn.close()

init_db()

class Item(BaseModel):
    id: int  # Добавляем поле id для модели
    name: str
    description: str = None
    price: float

@app.post("/items/", response_model=Item)
def create_item(item: Item):
    conn = sqlite3.connect(db_path)
    cursor = conn.cursor()
    cursor.execute('''
        INSERT INTO items (name, description, price)
        VALUES (?, ?, ?)
    ''', (item.name, item.description, item.price))
    conn.commit()
    item_id = cursor.lastrowid  # Получаем ID последней вставленной строки
    conn.close()
    return {**item.dict(), "id": item_id}  # Возвращаем объект с ID

@app.get("/items/", response_model=List[Item])
def get_items():
    conn = sqlite3.connect(db_path)
    cursor = conn.cursor()
    cursor.execute('SELECT * FROM items')
    rows = cursor.fetchall()
    conn.close()
    return [Item(id=row[0], name=row[1], description=row[2], price=row[3])
for row in rows]

@app.get("/items/{item_id}", response_model=Item)
def get_item(item_id: int):
    conn = sqlite3.connect(db_path)
    cursor = conn.cursor()
    cursor.execute('SELECT * FROM items WHERE id = ?', (item_id,))
    row = cursor.fetchone()
    conn.close()
    if row is None:
        raise HTTPException(status_code=404, detail="Item not found")
    return Item(id=row[0], name=row[1], description=row[2], price=row[3])
```

Создание ThreadGroup ("Number of Threads (users)" на 5, "Ramp-Up Period (seconds)" на 10 и "Loop Count" на 1.)



Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

● Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 5

Ramp-up period (seconds): 10

Loop Count: □ Infinite 1

☑ Same user on each iteration

□ Delay Thread creation until needed

□ Specify Thread lifetime

Duration (seconds):

Startup delay (seconds):

Добавление HTTP Request Sampler для POST запроса

Name: Create Item

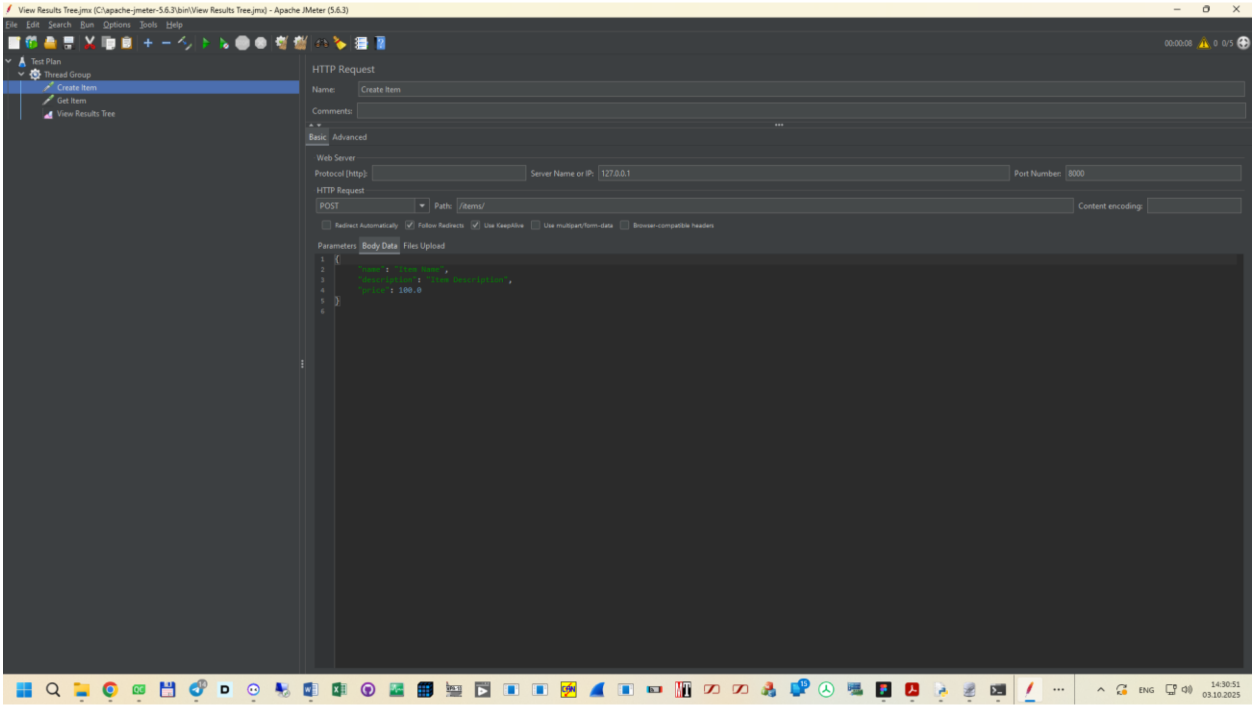
Server Name or IP: 127.0.0.1

Method: POST

Path: /items/

Body Data: Вставьте пример данных:

```
{
"name": "Item 1",
"description": "A description of Item 1",
"price": 100.0
}
```



View Results Tree.jmx (C:\apache-jmeter-5.6.3\bin\View Results Tree.jmx) - Apache JMeter (5.6.3)
File Edit Search Run Options Tools Help
00:00:08 0 0/5
Test Plan
Thread Group
Create Item
Get Item
View Results Tree
Basic Advanced
Parameters Body Data Files Upload
ENG
14:30:51
03.10.2025

HTTP Request

Name: Create Item

Comments:

Web Server

Protocol [http]: Server Name or IP: 127.0.0.1 Port Number: 8000

HTTP Request

POST Path: /items/ Content encoding:

□ Redirect Automatically ☑ Follow Redirects ☑ Use KeepAlive □ Use multipart/form-data □ Browser-compatible headers

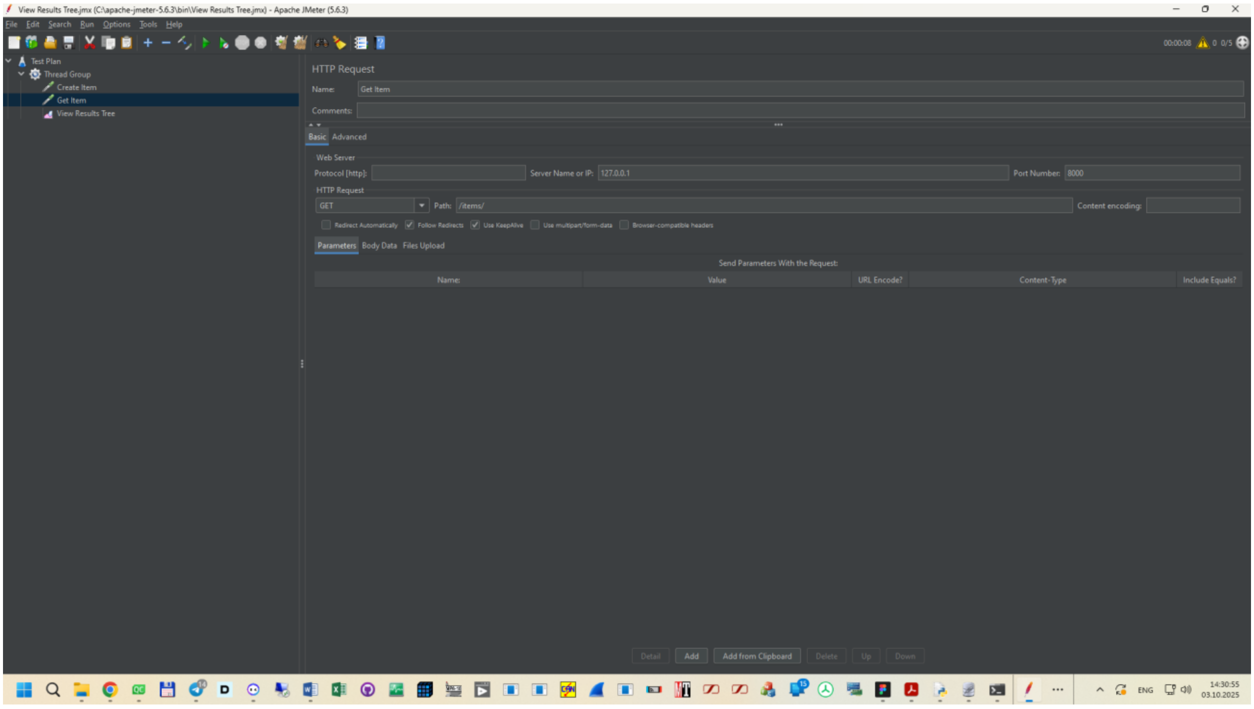
```
{
    "name": "Item Name",
    "description": "Item Description",
    "price": 100.0
}
```

Добавление HTTP Request Sampler для GET запроса

Name: Get Items

Server Name or IP: 127.0.0.1

Method: GET


View Results Tree.jmx (C:\apache-jmeter-5.6.3\bin\View Results Tree.jmx) - Apache JMeter (5.6.3)
File Edit Search Run Options Tools Help
Test Plan
Thread Group
Create Item
Get Item
View Results Tree
00:00:08 0 0/5
Basic Advanced
Parameters Body Data Files Upload
Detail Add Add from Clipboard Delete Up Down
14:30:55
03.10.2025

HTTP Request

Name: Get Item

Comments:

Web Server

Protocol [http]: Server Name or IP: 127.0.0.1 Port Number: 8000

HTTP Request

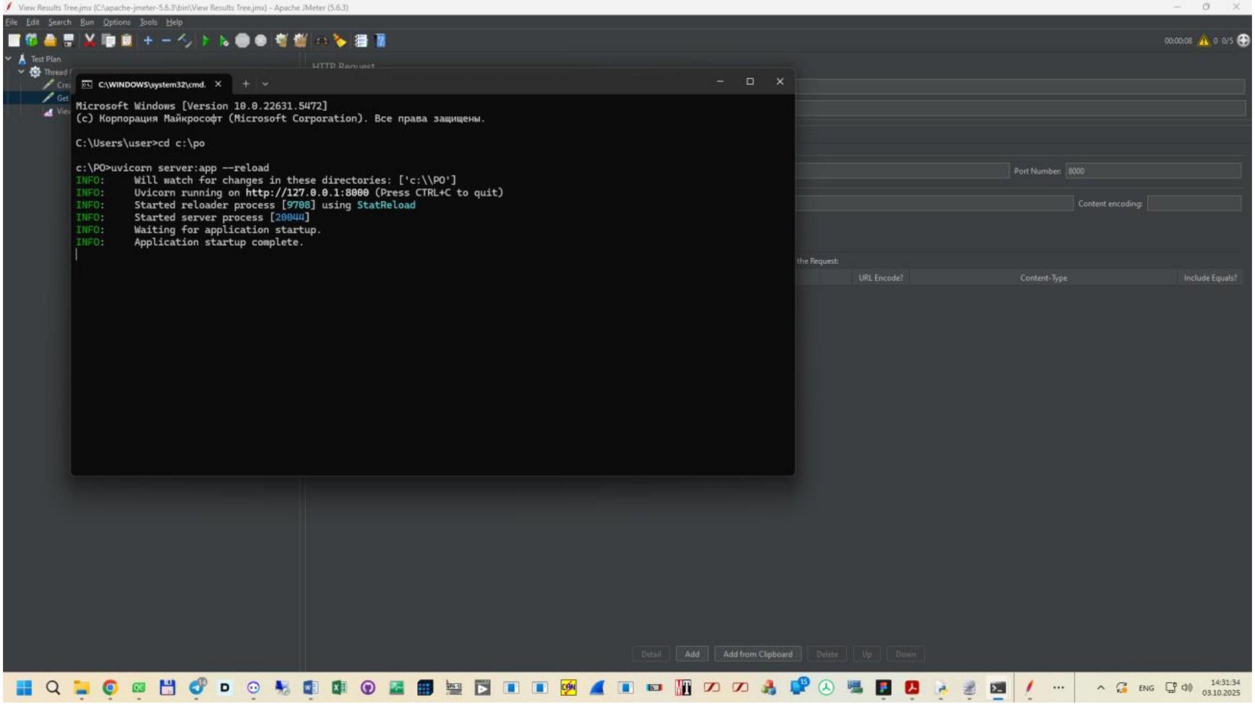
GET Path: /items/ Content encoding:

□ Redirect Automatically ☑ Follow Redirects ☑ Use KeepAlive □ Use multipart/form-data □ Browser-compatible headers

Send Parameters With the Request:

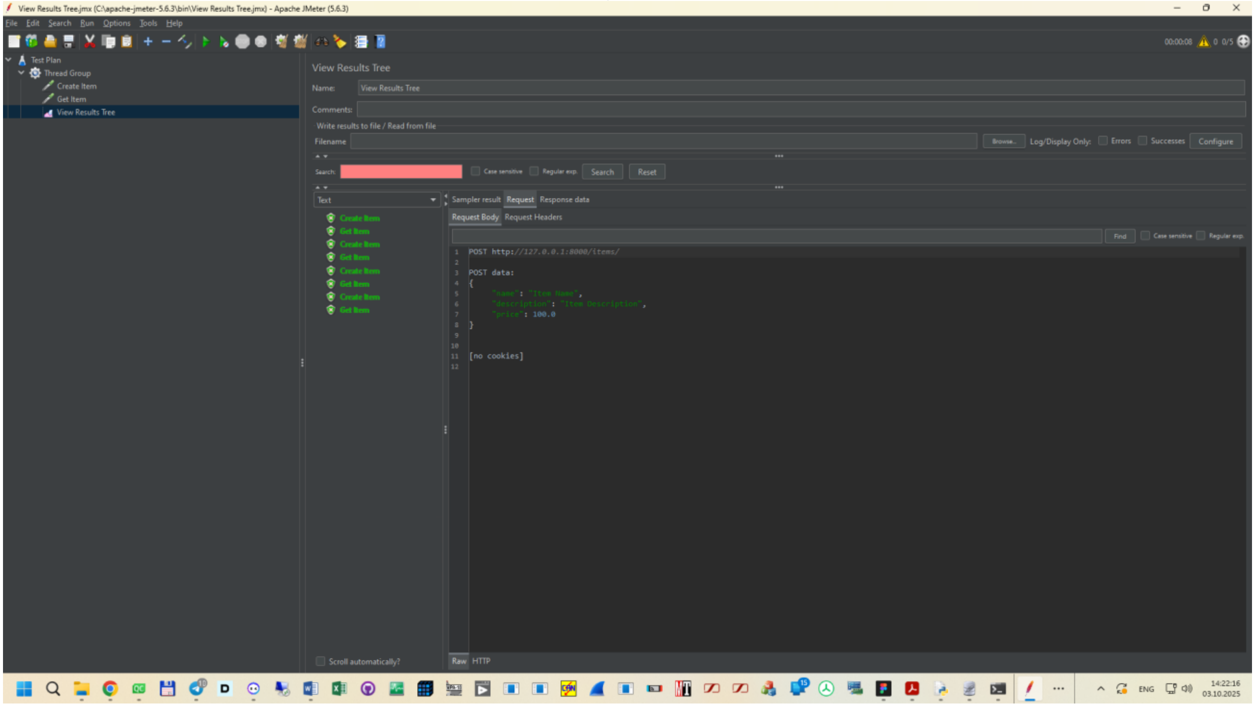
Name:	Value	URL Encode?	Content-Type	Include Equals?

Запуск сервера


View Results Tree.jmx (C:\apache-jmeter-5.6.3\bin\View Results Tree.jmx) - Apache JMeter (5.6.3)
C:\WINDOWS\system32\cmd.
14:31:34
03.10.2025

```
Microsoft Windows [Version 10.0.22631.5472]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

C:\Users\user>cd c:\po

c:\PO>uvicorn server:app --reload
INFO:     Will watch for changes in these directories: ['c:\\PO']
INFO:     Uvicorn running on http://127.0.0.1:8000 (Press CTRL+C to quit)
INFO:     Started reloader process [9708] using StatReload
INFO:     Started server process [20044]
INFO:     Waiting for application startup.
INFO:     Application startup complete.
```

Проведение тестов по отправке и получению запросов



View Results Tree

Name: View Results Tree

Comments:

```
POST http://127.0.0.1:8000/items/

POST data:
{
	"name": "Item Name",
	"description": "Item Description",
	"price": 100.0
}


[no cookies]
```