

**САНКТ-ПЕТЕРБУРГСКИЙ НАЦИОНАЛЬНЫЙ
ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО**

Дисциплина: Фронт-энд разработка

Отчет

Лабораторная работа 1

“Вёрстка сайта средствами HTML,
CSS и Bootstrap”

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Цель работы

Калькулятор калорий: Разработка инструмента для расчета суточной нормы калорий с учетом введенных пользователем данных о поле, возрасте, росте, весе и уровне физической активности. Возможно добавить функционал записи ежедневного потребления калорий и отображение прогресса.

Ход работы

1. HTML

Включить Bootstrap, CSS, JS file.

```
<meta name="viewport" content="width=device-width, initial-scale=1">
<meta charset="utf-8">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/bootstrap/5.0.0-beta3/css/bootstrap.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.15.4/css/all.min.css">
<link rel="stylesheet" type="text/css" href="/styles.css">
<script src="script.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/bootstrap/5.0.0-beta3/js/bootstrap.bundle.min.js"></script>
```

Navigation bar

```
<nav class="navbar navbar-expand-lg navbar-dark bg-dark fixed-top">
  <div class="container">
    <a href="index.html" class="navbar-brand">Logo</a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#myNavbar"
      aria-controls="myNavbar" aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="myNavbar">
      <ul class="navbar-nav me-auto mb-2 mb-lg-0">
        <li class="nav-item">
          <a class="nav-link" href="index.html">Home</a>
        </li>
      </ul>
      <ul class="navbar-nav">
        <li class="nav-item">
          <a class="nav-link" href="login.html"><i class="fa fa-user"></i> Log in</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="signup.html"><i class="fa fa-user-plus"></i> Sign up</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="user.html"><i class="fa fa-user-circle"></i></a>
        </li>
      </ul>
    </div>
  </div>
</nav>
```

Logo Home

Log in Sign up

- Далее я напишу HTML-код для макета страниц index.html, login.html, user.html, signup.html.



2. CSS

Я применяю знания, полученные из домашнего задания № 1, и знания, доступные в Интернете, для создания CSS для веб-сайта.

```
body {
  padding-top: 80px;
  background-color: #fff
}

.navbar-brand {
  font-weight: bold;
}

.wrapper {
  max-width: 500px;
  margin: 0 auto;
  padding: 20px;
  border: 1px solid #ccc;
  background-color: #ffffff;
}

.mb-3 {
  font-weight: bold;
}

.text-center {
  color: rgb(24, 184, 247);
  padding-bottom: 30px;
}

.info-box,
.history-box {
  border: 1px solid #ccc;
  padding: 10px;
  margin: 10px 0;
  background-color: #f5f5f5;
  border-radius: 10px;
}
```

3. JS

Функции для обработки расчета калорий, потребляемых за день.

```
function calculateCalories() {

  const weight = parseFloat(document.getElementById('weight').value);
  const height = parseFloat(document.getElementById('height').value);
  const age = parseInt(document.getElementById('age').value);
  const gender = document.getElementById('gender').value;
  const activityLevel = {
    'sedentary': 1.2,
    'lightly-active': 1.375,
    'moderately-active': 1.55,
    'very-active': 1.725,
    'super-active': 1.9
  }[document.getElementById('activity-level').value];

  console.log(weight)

  let bmr;

  if (gender === 'male') {
    bmr = 88.362 + (13.397 * weight) + (4.799 * height) - (5.677 * age);
  } else {
    bmr = 447.593 + (9.247 * weight) + (3.098 * height) - (4.330 * age);
  }

  const caloriesNeeded = bmr * activityLevel;

  const resultElement = document.getElementById('result');
  resultElement.innerHTML = `Estimated daily calorie needs: <strong>${caloriesNeeded.toFixed(2)} kcal</strong>`;
  saveResultToLocalStorage(caloriesNeeded);
}
```

Функция сохранения данных в localStorage

```
function saveResultToLocalStorage(caloriesNeeded) {

  let history = JSON.parse(localStorage.getItem('calorieHistory')) || [];

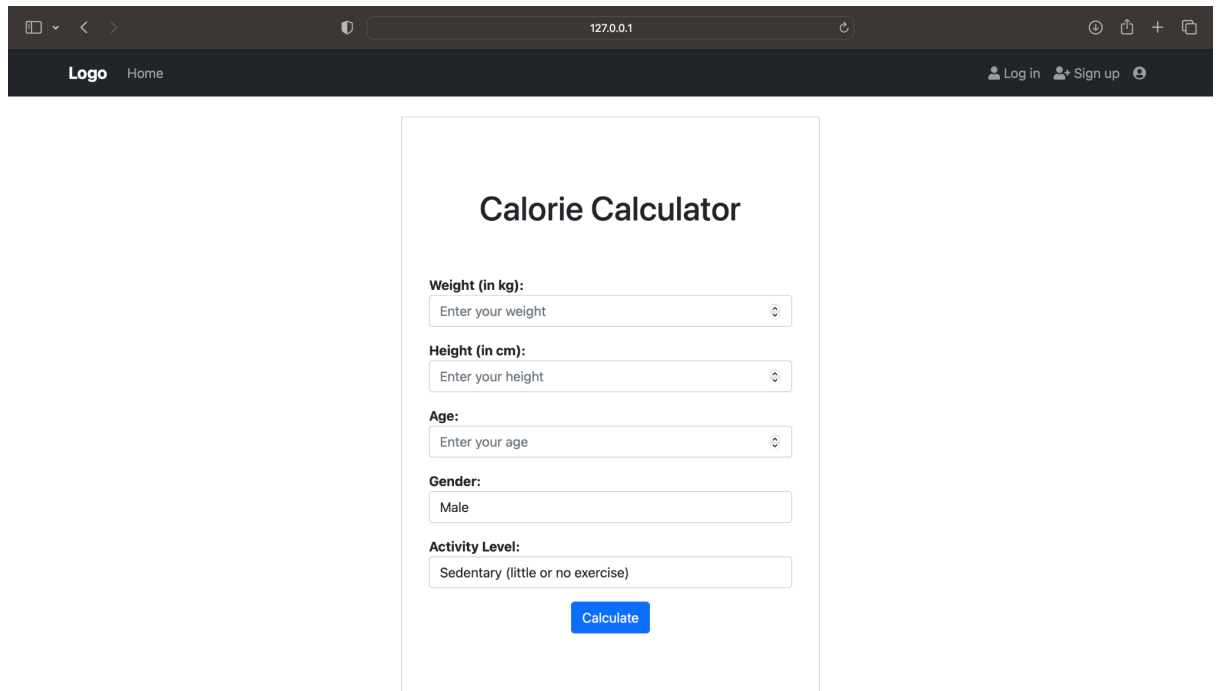
  const historyItem = {
    weight: parseFloat(document.getElementById('weight').value),
    height: parseFloat(document.getElementById('height').value),
    age: parseInt(document.getElementById('age').value),
    gender: document.getElementById('gender').value,
    activityLevel: document.getElementById('activity-level').value,
    caloriesNeeded: caloriesNeeded.toFixed(2),
    date: new Date().toLocaleString()
  };

  history.push(historyItem);

  localStorage.setItem('calorieHistory', JSON.stringify(history));
}
```

4. Результат

Home page



The screenshot shows a web browser window with a dark theme. The address bar displays "127.0.0.1". The page has a dark header with a "Logo" and a "Home" link on the left, and "Log in" and "Sign up" links on the right. The main content area is white and contains a "Calorie Calculator" form. The form includes input fields for "Weight (in kg)", "Height (in cm)", and "Age", each with a placeholder "Enter your weight/height/age". There is a "Gender" dropdown menu currently set to "Male" and an "Activity Level" dropdown menu currently set to "Sedentary (little or no exercise)". A blue "Calculate" button is positioned below the activity level dropdown.

Calorie Calculator

Weight (in kg):
Enter your weight

Height (in cm):
Enter your height

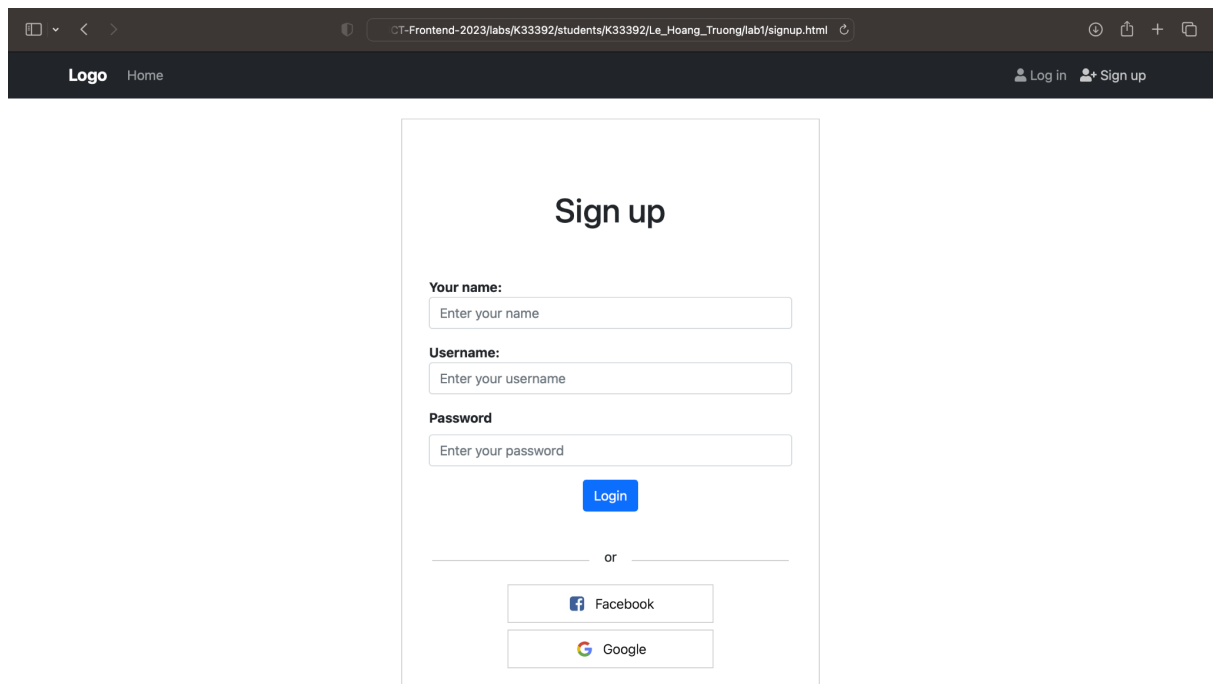
Age:
Enter your age

Gender:
Male

Activity Level:
Sedentary (little or no exercise)

Calculate

Sign up page



The screenshot shows a web browser window with a dark theme. The address bar displays a local file path. The page has a dark header with a "Logo" and a "Home" link on the left, and "Log in" and "Sign up" links on the right. The main content area is white and contains a "Sign up" form. The form includes input fields for "Your name:", "Username:", and "Password:", each with a placeholder "Enter your name/username/password". A blue "Login" button is positioned below the password field. Below the button is a horizontal line with the word "or" in the center. At the bottom, there are two buttons for social login: "Facebook" and "Google".

Sign up

Your name:
Enter your name

Username:
Enter your username

Password
Enter your password

Login

or

Facebook

Google

Login page

Logo

Home

Log in

Sign up

Log in


Not a member yet? [Sign up](#)


Username:

Password [Forgot Password](#)

Login

or

 Facebook

 Google


User page


Logo


Home


Log in

Sign up

 **Hoang Truong**

 natibatian@gmail.com

 23

 Male

Edit Profile

Calculation #1

Calories Needed: 1684.06 kcal

Calculation #2

Calories Needed: 1467.12 kcal

Calculation #3

Calories Needed: 2050.76 kcal

17:09:38, 29/9/2023

17:13:56, 29/9/2023

21:23:35, 29/9/2023

5. Вывод

После завершения первой лабораторной работы я познакомился с версткой веб-страниц с помощью HTML, CSS и Bootstrap. Я понимаю основную логику работы с DOM.