

# 1. Main features

- User registration
- User authentication
- Split bill equally amongst group members
- New bills appear in the bill section, on top of older bills
- Total amount of money others owe to the user and the user owes to others is displayed
- A bill is settled when both parties press the confirm button
- Extensive use of AJAX and jQuery
- Modern and streamlined design, slick look and feel
- Over 1400 lines of code
- Available at [cs139.dcs.warwick.ac.uk/~u1925873/cs139/billsplitter](http://cs139.dcs.warwick.ac.uk/~u1925873/cs139/billsplitter)

Email

Name

Password

Repeat Password

Register

Email

Password

Log In

Register Here

Groups Bills Account Log Out

Money you owe: £15  
Money owed to you: £60

You need to pay £15 to  
another@user.ac.uk

Water bill  
Not yet confirmed by payee.

Confirm payment of bill

You need to receive £60  
from another@user.ac.uk

Groups Bills Account Log Out

Split equally

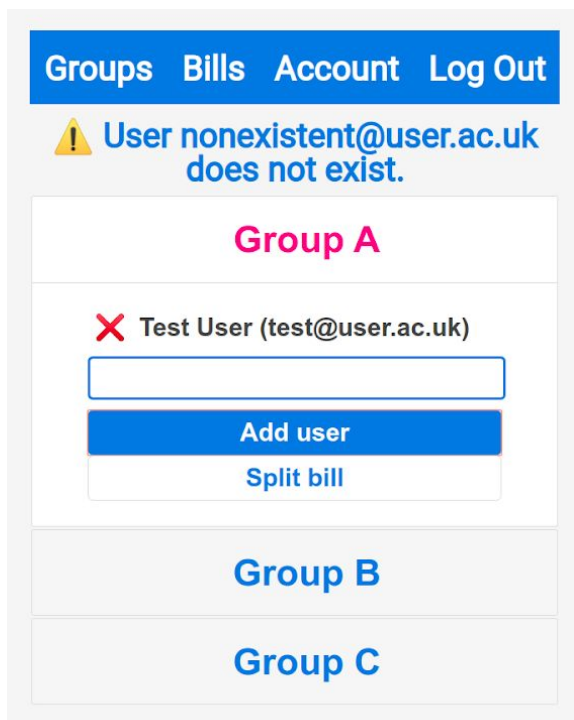
Amount (£)

Description

Split

## 2. Accessibility and functionality

- Big letters and buttons
- Simple interface with intuitive UI
- Little to no reliance on colour coding
- High contrasts
- Use of a sans serif font (from Google Fonts) for better clarity on smaller displays
- Extensive use of jQuery UI, which implements many accessibility features
- The language of the website is specified in the header
- All buttons and inputs are accessible using the keyboard
- The website is responsive and optimised for mobile
- Buttons give feedback that are clickable when hovered over
- All forms give feedback on user error



Groups Bills Account Log Out

⚠ User nonexistent@user.ac.uk does not exist.

**Group A**

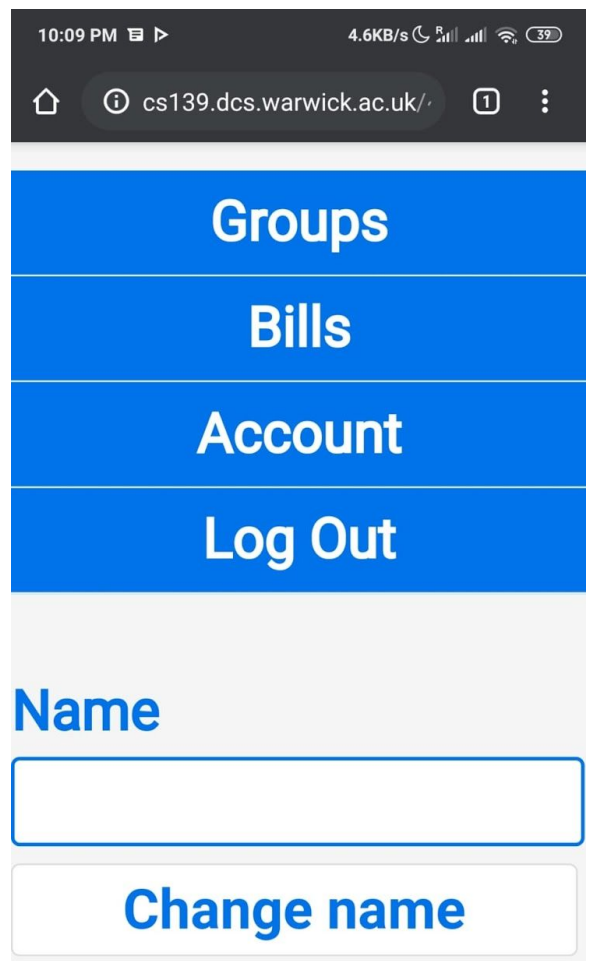
✗ Test User (test@user.ac.uk)

Add user

Split bill

Group B

Group C



10:09 PM 4.6KB/s cs139.dcs.warwick.ac.uk/

Groups

Bills

Account

Log Out

Name

Change name

### 3. Additional functionality

- Bill description
- Person to person billing
- Users can be part of multiple groups
- Group requests: when a user is added to a group, they receive a joining request, which can be accepted or declined
- Users can leave groups
- Group owners can kick users out
- Email notifications
- Users can change their name
- Support for emoji (and UTF-8 in general)

[Groups](#) [Bills](#) [Account](#) [Log Out](#)

You have been invited by  
**another@user.ac.uk** to join group

**My Group**

[Accept](#)

[Reject](#)

**My Group**

Another User  
(another@user.ac.uk)

Test User (test@user.ac.uk)

[Leave group](#)

[Split bill](#)

**Amount (£)**

**Description**

**Payer's email**

[Add new bill](#)

**Group A**

✗ 🐼 (test@user.ac.uk)

✗ Another User  
(another@user.ac.uk)

[Add user](#)

[Split bill](#)

**Group B**

**Group C**

❤️❤️❤️

[Groups](#) [Bills](#) [Account](#) [Log Out](#)

**Name**

[Change name](#)

**Old password**

**New password**

**Repeat new password**

[Change password](#)

And the big feature: a REST API, which allows developers to interface with the bill splitter and do wonders such as task automation or creating a mobile application for the bill splitter.

The documentation of the API is available at

[cs139.dcs.warwick.ac.uk/~u1925873/cs139/billsplitter/documentation.html](http://cs139.dcs.warwick.ac.uk/~u1925873/cs139/billsplitter/documentation.html).

*Bootstrap was used when formatting the documentation.*

## POST /deleteRequest.php

Deletes request to join group.

### Parameters

**requestId**: request's id

## POST /deleteUserFromGroup.php

Removes user from group.

### Parameters

**groupId**: group's id

**email**: removed user's email

## GET /getBills.php

Returns list of bills.

## **4.Security**

- Strings are escaped at frontend, backend and database levels (JavaScript, PHP and SQL)
- Users can access only resources they own
- Passwords are hashed and salted
- Passwords are at least 8 characters long
- Users can change their password