

Application for 2018 University of California Larry L. Sautter Award for Innovation in Information Technology

Project Title: UCSD Negative Charges Tool

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Project Team

Student Business Services Team

Gayle Ta	Project Sponsor
Jared Church	Project Co-Sponsor
Franklin Garrett	Project Co-Sponsor
Mark Rasmussen	Design and Project Leader
Mark Adams	Project Analysis
Veronica Olvera	Project Analysis/Integration Architect
Jane Villanueva	Project Testing
Leena Abonasser	Project Testing

UCSD Information Technology Services Team:

Jonathan Whitman	Project Sponsor
Christina Ivany	Project Co-Sponsor
John Lane	Project Manager
Jeendru Reddy	Principal Architect
Reynaldo Cruz	Developer
Viet Truong	Developer
Scott Steckbauer	Developer

UCSD Departmental Testing Team:

Nicole Dennis	UCSD Housing
Cathleen Incandela	UCSD Housing
Cindy McDaniel	UCSD Student Health Services
Jennifer Rodgers	UCSD Student Health Services
Jessica Morris	UCSD Parking and Transportation

Project Overview

The UCSD Negative Charges Tool is a well-designed web application that allows charging departments at UCSD to quickly and efficiently reverse charges on accounts.

The Negative Charges Tool

Problem Definition

The accounts receivables for the University of California San Diego are processed in the Accounts Receivables (AR) module of the university's mainframe based student information system (ISIS). The system processes approximately 2,000,000 charge transactions annually. Many of the charge transactions will get reversed as required. The constraints and failure points in the current ISIS based system leads to many reversing transactions that are entered in error by the user and cannot be reconciled with the original charge transaction in ISIS. This long standing issue of errant charges that cannot be reconciled was inefficient and expensive to the university.

Project Team and Goal

In November of 2016 a white paper was authored by Mark Rasmussen in UCSD's Student Business Services office that clearly defined the issue and financial impact of errant/unreconciled negative charges. The white paper resulted in the chartering of a project team that was tasked with achieving the goal of developing and implementing an intuitive and efficient tool (UCSD Negative Charge Tool) that charging departments on campus can use to enter reversing charges.

Innovative Technology Solution

The white paper proposed an innovative technology solution design on how the issue of errant/unreconciled negative charges could be fixed. The design is an intuitive online web application that interacts with ISIS and processes the negative/reversing charge accurately on behalf of the user. The tool was developed utilizing the following tools; Java 1.8, Spring, Hibernate, HTML, CSS, JQuery, AJAX. The user interface was developed using HTML, CSS and the backend using Spring and Hibernate. The application uses data pulled from the ISIS AR tables and calls a batch job that updates the data in ISIS. The application is completely role based, as it determines the users charge reversal permissions from their user id. The solution design allows the user to:

- Enter the account ID into the tool and then the service will efficiently scan the account to correctly identify the original charge that needs to be reversed.
- The service will then efficiently reverse all or part of the charge and clear up any affected payments.

First Screen – The user will see the start page for the Negative Charge Tool

NEGATIVE CHARGES UC San Diego

Blink Student Class/Major Course Planning Resources Student Queries Q-

*Pid:
Enter pid here

Detail Code:
optional

From Date:
mm/dd/yyyy

To Date:
mm/dd/yyyy

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Second Screen – The user enters the account ID

NEGATIVE CHARGES UC San Diego

Blink Student Class/Major Course Planning Resources Student Queries Q-

*Pid:
A11431273

Detail Code:
optional

From Date:
mm/dd/yyyy

To Date:
mm/dd/yyyy

Search

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Third Screen – The user enters code for the charge to be reversed or date range for charges.

NEGATIVE CHARGES
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Blink Student Class/Major Course Planning Resources Student Queries
Q-

***Pid:**

Detail Code:

From Date:

To Date:

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Fourth Screen – The user will see a list of applicable charges that can be reversed.

NEGATIVE CHARGES
UC San Diego

Blink Student Class/Major Course Planning Resources Student Queries
Q-

SBS Account Information

PID : **A11431273**
 Student Name : **Abonasser, Leena**

Display records Filter:

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		BURLTE	UCSD STATEMENT LATE FEE	320	2018-05-18	25.00	25.00		<input type="button" value="Enter Revers"/>
ABONASSER, LEENA		TPSSFP	Parking-S Permit Full Payment	309	2017-09-06	61.00	0.00	61.00	<input type="button" value="Enter Revers"/>
ABONASSER, LEENA		BURCCR	CC REFUND ON PYMT - 376186381	311	2017-10-13	110.60	0.00	110.60	<input type="button" value="Enter Revers"/>
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	<input type="button" value="Enter Revers"/>

Showing 1 to 4 of 4 entries Previous **1** Next

Instructions:
 Select above transaction to reverse/modify, reduce the charge amount, enter reverse amount and click "Submit" button

Fifth Screen – Per instructions, the user selects the charge to reverse.

NEGATIVE CHARGES
UC San Diego

Blink Student Class/Major Course Planning Resources Student Queries
Q-

SBS Account Information

PID : **A11431273**
 Student Name : **Abonasser, Leena**

Display records Filter:

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		BURLTE	UCSD STATEMENT LATE FEE	320	2018-05-18	25.00	25.00		<input type="button" value="Enter Revers"/>
ABONASSER, LEENA		TPSSFP	Parking-S Permit Full Payment	309	2017-09-06	61.00	0.00	61.00	<input type="button" value="Enter Revers"/>
ABONASSER, LEENA		BURCCR	CC REFUND ON PYMT - 376186381	311	2017-10-13	110.60	0.00	110.60	<input type="button" value="Enter Revers"/>
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	<input type="button" value="Enter Revers"/>

Showing 1 to 4 of 4 entries Previous **1** Next

Instructions:
 Select above transaction to reverse/modify, reduce the charge amount, enter reverse amount and click "Submit" button

Sixth Screen – The user will get a Confirmation Page

ps BOOKMARKS

NEGATIVE CHARGES UC San Diego

Blink Student Class/Major Course

Are you sure that you want to reverse/modify or reduce this charge(s)?

Cancel Yes

SBS Account Information

PID : A11431273

Student Name : Abonasser, Leena

Display 10 records

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		BURLTE	UCSD STATEMENT LATE FEE	320	2018-05-18	25.00	25.00		Enter Revers
ABONASSER, LEENA		TPSSFP	Parking-S Permit Full Payment	309	2017-09-06	61.00	0.00	61.00	Enter Revers
ABONASSER, LEENA		BURCCR	CC REFUND ON PYMT - 376186381	311	2017-10-13	110.60	0.00	110.60	Enter Revers
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	Enter Revers

Showing 1 to 4 of 4 entries

Previous 1 Next

Instructions:

Select above transaction to reverse/modify, reduce the charge amount, enter reverse amount and click "Submit" button

Submit

Seventh Screen – The user will get an Acknowledgement Page

NEGATIVE CHARGES UC San Diego

Blink Student Class/Major Course

The charge(s) was successfully reversed

OK

SBS Account Information

PID : A11431273

Student Name : Abonasser, Leena

Display 10 records

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		BURLTE	UCSD STATEMENT LATE FEE	320	2018-05-18	25.00	25.00		Enter Revers
ABONASSER, LEENA		TPSSFP	Parking-S Permit Full Payment	309	2017-09-06	61.00	0.00	61.00	Enter Revers
ABONASSER, LEENA		BURCCR	CC REFUND ON PYMT - 376186381	311	2017-10-13	110.60	0.00	110.60	Enter Revers
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	Enter Revers

Showing 1 to 4 of 4 entries

Previous 1 Next

Instructions:

Select above transaction to reverse/modify, reduce the charge amount, enter reverse amount and click "Submit" button

Submit

Eighth Screen – The user will get a Resolution Page

NEGATIVE CHARGES UC San Diego

Blink Student Class/Major Course Planning Resources Student Queries

Show 10 entries

Search

pid	Detail Code	Charge Amount	Trans Number	Effective Date	Reversal Amount
A11431273	BURLTE	25.00	00000320	20180518	25.00

Showing 1 to 1 of 1 entries

Previous 1 Next

Submit

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Solution Impact

There are approximately 2,000,000 charge transactions processed annually in the university's AR system by multiple departments across the entire campus. A large number of these transactions need to be manually reversed by staff throughout the year. The process for manually reversing a charge in the AR system is cumbersome and has multiple failure points. As a result of this manual process many charges are reversed in error. The staff in the Student Business Services office is responsible for reconciling these errant/unreconciled negative charges. At times SBS will have to handle as many as 50 to 100 errant/unreconciled negative charges per day. The UCSD Negative Charges Tool provides an easy to use and reliable system that allows the department's users to efficiently and effectively reverse their charges. As a result the university has and will continue to see a cost savings as well as overall data reliability.

Collaboration

SBS collaborated closely with developers in our ITS team as well as with representatives from some of the primary charging departments.

Solution Deployment

After successful development and testing the Student Business Services has started to implement the tool on campus. It has been successfully deployed to a few of the top campus departments that process negative charges. Multiple departments at UCSD routinely process charge reversals and will be benefitting from the Negative Charge Tool. They include; Housing Office, Registrar's Office, Parking and Transportation, College Business Office, Library, Summer Sessions Office, Student Health Services, Bookstore, Daycare, Imprints, University Center, International Center and Visual Arts. A strong marketing push along with a training video is being developed at which time the tool will be deployed to all charging departments on campus.

Success Measures

As stated previously, the tool has been successfully deployed to a few of the top campus departments that process negative charges. The number of errant/unreconciled negative charges for those departments has dropped by approximately 90%. The only problems that still occur come from users in those departments that are not making use of the tool. Once fully deployed we expect to totally eradicate errant/unreconciled negative charges.