Design Document

Team X

7 february 2012

Table 1: Team

Name	ID Number
X	Y

1 Introduction

The introduction of the document provides an overview of the entire document, briefly introducing what are its goals, and what information is to be found in it.

2 Architectural Design

This section must give a high-level description of the system in terms of its modules and their respective purpose and exact interfaces.

2.1 Architectural Diagram

A UML class diagram or package diagram depicting the high-level structure of the system, accompanied by a one-paragraph text describing the rationale of this design. It is mandatory that the system be divided into at least two subsystems, and that the purpose of each of these subsystems be exposed here.

2.2 Subsystem Interface Specifications

Specification of the software interfaces between the subsystems, i.e. specific messages (or function calls) that are exchanged by the subsystems. These are also often called "Module Interface Specifications". Description of the parameters to be passed into these function calls in order to have a service fulfilled, including valid and invalid ranges of values. Each subsystem interface must be presented in a separate subsection.

3 Detailed Design

Complete description of the system design, describing one subsystem separately in respective subsection. UML class diagrams are to be used, as well as a short textual description describing the purpose of each class.

3.1 Drop Down Menu - Categories

Detailed Design Diagram

UML class diagram depicting the internal structure of the subsystem, accompanied by a paragraph of text describing the rationale of this design.

Units Description

Detailed Design Diagram

Units Description

3.1.1 Statistics$\langle Scene \rangle$

Methods:

3.1.2 Transaction $\langle Scene \rangle$:

Methods:

Class Name	Statistics		
Description	User experience depends on tools to properly visualize monetary data. This class contains methods to process data for being used in display classes. Using this class involves calls of getters to acquire processed data.		
Attributes	Visibility	Data Type | Name	Description
Methods	Visibility	Name	Description
	public	getAllTransactions()	Return the transaction Dao records
	public	getTotalMonths()	Return the total months of records
	public	getMonthsTransactions(int number)	Return the Transaction list matching a time
	public	getTotalAverage()	Return the average of all transactions
	public	getMonthsAverage(int number)	Return the average of all transactions in a month
	public	getAverageOut()	Return the average of all negative transactions
	public	getAverageInMonth(int number)	Return the average in a month
	public	getAverageOutMonth(int number)	Return the average of all negative transactions in a month
	public	getTotalMedian()	Return the median of all
	public	getMonthsMedian(int number)	Return the median of months
	public	getMedianIn()	
	public	getMedianOut()	
	public	getMedianInMonth(int number)	
	public	getMedianOutMonth(int number)	
	public	getRecurring()	
	public	getMaxIn()	Return the largest tranaction
	public	getMaxOut()	Return the max withdrawn
	public	getMaxRecurring()	

Method Name	getAllTransactions()
Description	desc
Input	None
Output	List of transactions
Return Type	Generic type of Dao

Method Name	getTotalMonths()
Description	Return the total months of records
Input	None
Output	Total months
Return Type	Integer

Method Name	getMonthsTransactions(int number)
Description	Return the Transaction list matching a time
Input	integer month number
Output	List of transactions
Return Type	Generic type of Dao

Method Name	getTotalAverage()
Description	Return the average of all transactions
Input	None
Output	Output average
Return Type	double

Method Name	getMonthsAverage(int number)
Description	return the average of all transactions in a month
Input	int month number
Output	average at a time
Return Type	double

Method Name	getAverageIn()
Description	Return the average of all possitive transactions
Input	None
Output	positive average
Return Type	double

Method Name	getAverageOut()
Description	Return the average of all negative transactions
Input	None
Output	negative transaction average
Return Type	double

Method Name	getAverageInMonth(int number)
Description	Return the average in a month
Input	int month number
Output	average in a month
Return Type	double

Method Name	getAverageOutMonth(int number)
Description	Return the average of all negative transactions in a month
Input	integer month number
Output	average aquired in month
Return Type	double

Method Name	getTotalMedian()
Description	desc
Input	None
Output	None
Return Type	None

Method Name	getTotalMedian()
Description	Return the median of all
Input	-
Output	-
Return Type	-

Method Name	getMonthsMedian(int number)
Description	Return the median of months
Input	integer month number
Output	median of month
Return Type	double

Method Name	getMedianIn()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getMedianOut()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getMedianInMonth()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getMedianOutMonth()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getRecurring()
Description	desc
Input	None
Output	None
Return Type	None

Method Name	getMaxIn()
Description	Return the largest tranaction
Input	None
Output	single Transaction
Return Type	Transaction

Method Name	getMaxOut()
Description	Return the max withdrawn
Input	None
Output	single Transaction
Return Type	Transaction

Method Name	getMaxRecurring()
Description	desc
Input	-
Output	-
Return Type	-

Class Name	Transaction(String name, String type, double amount, String description, Date date)
Description	The Transaction class holds information on financial data that is to be sent to the server, processed by statistics, deleted or anything requiring data manipulation.

Attributes

Visibility	Data Type	Name	Description
Private	int	id	an id of the transaction
Private	String	name	Name of user
Private	String	type	the type of action done
Private	double	amount	the quantity acted on
Private	String	description	a description of what it is
Private	Date	date	The date of the transaction

Methods

Visibility	Name	Description
public	Transaction()	default constructor
public	Transaction(String name, String type, double amount, String description, Date date)	argument constructor
public	Transaction(int id, String name, String type, double amount, String description, Date date)	argument constructor with given id
public	getId()	return ID
public	setId(int id)	set the ID
public	getName()	get the name
public	setName(String name)	set the name
public	getType()	get the type
public	setType(String type)	set the type
public	getDescription()	get the description
public	setDescription(String description)	set the description
public	getDate()	get the date
public	setDate(Date date)	set the date
public	getAmount()	get the amount
public	setAmount(double amount)	set the amount
public	toString()	Return a string representation of data

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
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Description	default constructor
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Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Method Name	Transaction()
Description	default constructor
Input	None
Output	None
Return Type	None

Class Name	Transaction(String name, String type, double amount, String description, Date date)			
Description	A transaction Dao is the way that transaction connect to the database. a Transaction Dao has reference to a set of Transaction objects and performs operations on networks with them.			
Attributes	Visibility private private	Data Type ConnectionSource Dao $\langle Transaction, Integ$	Name connectio transactic	Description The address of a connection the Transaction it is connected to
Methods	Visibility	Name	Description	
	public	TransactionDao()	Default constructor	
	public	getTransactionById()	Return the record with a certain ID	
	public	getAllTransactions(int number)	Return all Transaction objects contained	
	public	updateTransaction(Transacti transaction)	updates an sql record	
	public	insert(Transaction transaction)	inserts a transaction	
	public	delete(Transaction transaction)	Removes a transaction	

Method Name	TransactionDao()
Description	desc
Input	None
Output	List of transactions
Return Type	Generic type of Dao

3.1.3 TransactionDao $\langle Scene \rangle$:

Methods:

Method Name	getTransactionById()
Description	Return the total months of records
Input	None
Output	Total months
Return Type	Integer

Method Name	getAllTransactions(int number)
Description	Return the Transaction list matching a time
Input	integer month number
Output	List of transactions
Return Type	Generic type of Dao

Method Name	updateTransaction(Transaction transaction)
Description	Return the average of all transactions
Input	None
Output	Output average
Return Type	double

Method Name	insert(Transaction transaction)
Description	return the average of all transactions in a month
Input	int month number
Output	average at a time
Return Type	double

Method Name	delete(Transaction transaction)
Description	Return the average of all possitive transactions
Input	None
Output	positive average
Return Type	double

Class Name	Transaction(String name, String type, double amount, String description, Date date)			
Description	User experience depends on tools to properly visualize monetary data. This class contains methods to process data for being used in display classes. Using this class involves calls of getters to acquire processed data.			
Attributes	Visibility	Data Type	Name	Description
	private	Transaction	transaction	Description
	private	EventHandl	onAction	Description
	private	ObjectPrope	propertyOnActior	Description
Methods	Visibility	Name		Description
	public	TransactionView(Transactior transaction, EventHandler⟨*MouseEvent*⟩ onAction)		default constructor
	public	styleComponent()		Return the total months of records
	public	setContent(int number)		Return the Transaction list matching a time
	public	setOnAction(EventHandler⟨ eventHandler)		Return the average of all transactions
	public	getOnAction(int number)		Return the average of all transactions in a month
	public	getTransaction()		Return the average of all negative transactions

Method Name	getAllTransactions()
Description	desc
Input	None
Output	List of transactions
Return Type	Generic type of Dao

3.1.4 TransactionView ⟨*Scene*⟩:

Methods:

Method Name	getTotalMonths()
Description	Return the total months of records
Input	None
Output	Total months
Return Type	Integer

Method Name	getMonthsTransactions(int number)
Description	Return the Transaction list matching a time
Input	integer month number
Output	List of transactions
Return Type	Generic type of Dao

Method Name	getTotalAverage()
Description	Return the average of all transactions
Input	None
Output	Output average
Return Type	double

Method Name	getMonthsAverage(int number)
Description	return the average of all transactions in a month
Input	int month number
Output	average at a time
Return Type	double

Method Name	getAverageIn()
Description	Return the average of all possitive transactions
Input	None
Output	positive average
Return Type	double

Method Name	getAverageOut()
Description	Return the average of all negative transactions
Input	None
Output	negative transaction average
Return Type	double

Method Name	getAverageInMonth(int number)
Description	Return the average in a month
Input	int month number
Output	average in a month
Return Type	double

Method Name	getAverageOutMonth(int number)
Description	Return the average of all negative transactions in a month
Input	integer month number
Output	average aquired in month
Return Type	double

Method Name	getTotalMedian()
Description	desc
Input	None
Output	None
Return Type	None

Method Name	getTotalMedian()
Description	Return the median of all
Input	-
Output	-
Return Type	-

Method Name	getMonthsMedian(int number)
Description	Return the median of months
Input	integer month number
Output	median of month
Return Type	double

Method Name	getMedianIn()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getMedianOut()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getMedianInMonth()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getMedianOutMonth()
Description	desc
Input	-
Output	-
Return Type	-

Method Name	getRecurring()
Description	desc
Input	None
Output	None
Return Type	None

Method Name	getMaxIn()
Description	Return the largest tranaction
Input	None
Output	single Transaction
Return Type	Transaction

Method Name	getMaxOut()
Description	Return the max withdrawn
Input	None
Output	single Transaction
Return Type	Transaction

Method Name	getMaxRecurring()
Description	desc
Input	-
Output	-
Return Type	-