

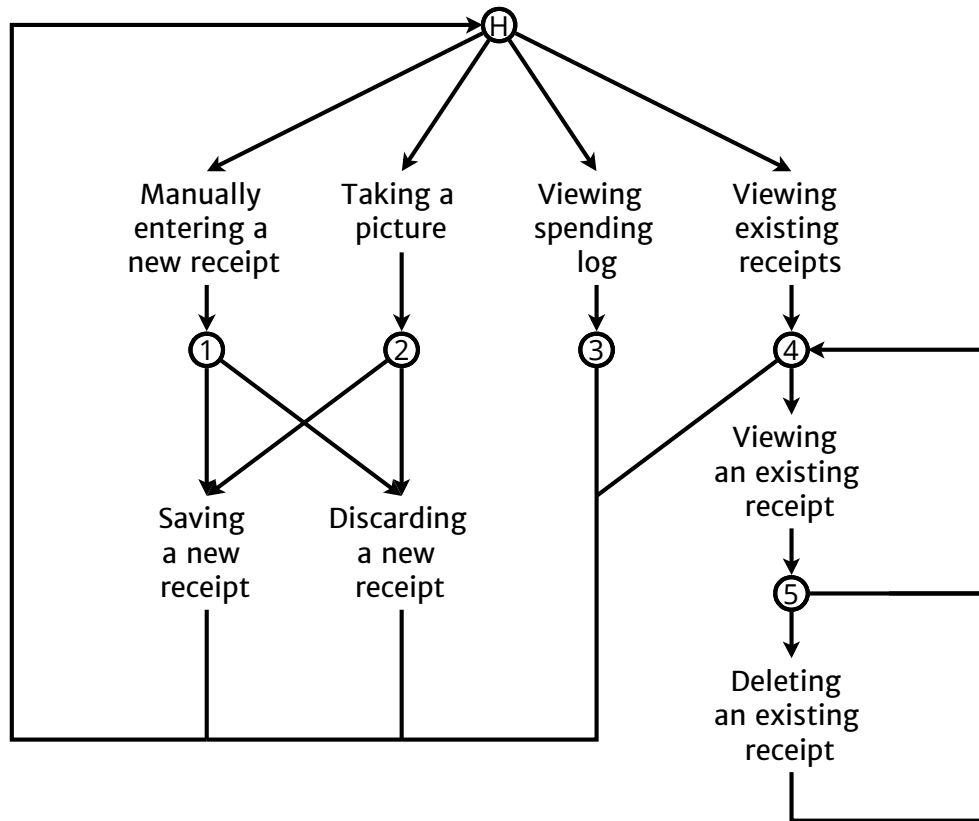
CEIPTS

A Functional and Behavioral Description

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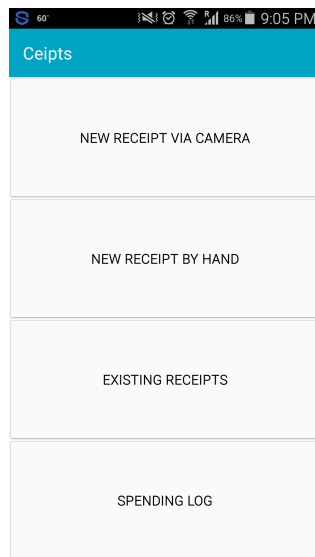
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State Transition Diagram



Screenshots

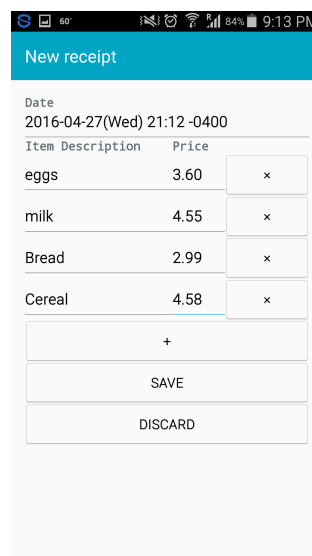
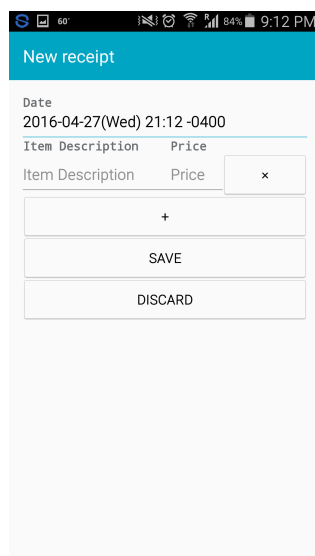
AHa (Home Screen)



AHb (Picture Preview)



A1 (New Receipt)



A2 (Picture-to-Receipt)

Receipt		
Date 2016-04-27(Wed) 21:06 -0400		
Item Description	Price	
RR 12C REG MFFN	5.99	x
GE FHCIHL HC	4.99	x
BISCOFF COOKIES	3.89	x
CREHM CHEESE	2.69	x
BISCOFF COOKIES	3.89	x
HRSHY HLHONO BHR	1.00	x
HERSHEY BHR	1.00	x
esslands 18	5.99	x
THX	0.80	x
ii BHLHNCE	30.75	x

Receipt		
Date 2016-04-27(Wed) 21:06 -0400		
Item Description	Price	
RR 12C REG MFFN	6.99	x
GE FHCIHL HC	4.99	x
BISCOFF COOKIES	3.89	x
CREHM CHEESE	2.69	x
BISCOFF COOKIES	3.89	x
HRSHY HLHONO BHR	1.00	x
HERSHEY BHR	1.00	x
esslands 18	5.99	x
tax	0.80	x
+		

Receipt		
BISCOFF COOKIES	3.89	x
CREHM CHEESE	2.69	x
BISCOFF COOKIES	3.89	x
HRSHY HLHONO BHR	1.00	x
HERSHEY BHR	1.00	x
esslands 18	5.99	x
Item Description	Price	
+		
SAVE		
DISCARD		
SHOW ORIGINAL PICTURE		
SHOW PREPROCESSED PICTURE		

A3 (Spending Log)

Spending Log	
Item Description	Price
2016-04-27(Wed) 09:30 -0400	
FROSTED FLRKES	4.00
KELL CORN FLRKES	3.79
MRYONNRRISE	4.45
OE LT Ban vIN RO	1.99
OE cHEEsE	2.79
ESSIE NRIL	8.50
OE 2x MILK 128 Oz NP	3.26
RRaFT cHEEsE nc	2.99
KRRFT OHEESE RO	2.99
2016-04-27(Wed) 13:43 -0400	
FROSTED FLRKES	4.00
KELL CORN FLRKES	3.79
SK TUNR	3.99
MRYONNRRISE	4.45
GE LT BRLS vIN Rc	1.99
FSSIE NRIL	8.50
GE 2% MILK 12a Oz NP	3.26
KRaFT cHEEsE ac	2.99
KRRFT cHEESE Rc	2.99
GE BREAST TENDE	7.14
SCHUEBEL BREHIJ	2.49
RR FLUTE TUBE P	11.99
THX	1.43
mf BHLHNCE	67.82
hshshs	67.40
2016-04-27(Wed) 21:12 -0400	
esslands 18	5.99

A4 (Receipts List)

Receipts List	
2016-04-27(Wed) 09:30 -0400	
2016-04-27(Wed) 13:43 -0400	
2016-04-27(Wed) 21:06 -0400	

A5 (Existing Receipt)

Date	Item Description	Price
2016-04-27(Wed) 21:06 -0400	RR 12C REG MFFN	6.99
	GE FHCIHL HC	4.99
	BISCOFF COOKIES	3.89
	CREHM CHEESE	2.69
	BISCOFF COOKIES	3.89
	HRSHY HLHONO BHR	1.00
	HERSHEY BHR	1.00
	esslands 18	5.99
	tax	0.80
Total:		31.24

DELETE

Date	Item Description	Price
2016-04-27(Wed) 21:12 -0400	eggs	3.60
	milk	4.55
	Bread	2.99
	Cereal	4.58
Total:		15.72

DELETE

User Actions

- U01 Taking a picture
Triggering event: Clicking on “NEW RECEIPT VIA CAMERA” button and then clicking on the image capture button.
Expected result: A parsed receipt is shown with editable fields and controls for U03 and U04.
- U02 Manually entering a new receipt
Triggering event: Clicking on “NEW RECEIPT BY HAND” button.
Expected result: An empty receipt is shown with editable fields and controls for U03 and U04.

- U03 Saving a new receipt
Triggering event: Clicking on “SAVE” button.
Expected result: Response indicating receipt is saved and then returning to state with control for U01.
- U04 Discarding a new receipt
Triggering event: Clicking on “DISCARD” button.
Expected result: Response indicating receipt is not saved and then returning to state with control for U01.
- U05 Viewing existing receipts
Triggering event: Clicking on “EXISTING RECEIPTS” button.
Expected result: Partial information about every existing receipt is shown in a grid and control for U06.
- U06 Viewing an existing receipt
Triggering event: Clicking on a receipt title.
Expected result: An existing receipt is shown with read-only fields and controls for U10.
- U10 Deleting an existing receipt
Triggering event: Clicking on “DELETE” button.
Expected result: Response confirming receipt deletion.
- U11 Viewing spending log
Triggering event: Clicking on “SPENDING LOG” button.
Expected result: The Spending Log is shown.

System Actions

Taking a picture

- S01-1 Frontend: Switch to image capture activity to capture image.
- S01-2 Image capture activity: Save camera image to file.
- S01-3 Image capture activity: End.
- S01-4 Frontend: Send image transcription request to backend.
- S01-5 Backend: Open image.
- S01-6 Backend: Preprocess image.
- S01-7 Backend: Transcribe preprocessed image.
Expected result: Line-by-line transcription
- S01-8 Backend: Parse transcription.
Expected result: Receipt structure
- S01-9 Backend: Send receipt structure to frontend.
- S01-10 Frontend: Display receipt structure in editable-field receipt structure layout.

Manually entering a new receipt

- S02-1 Frontend: Create blank editable-field receipt structure layout.

Saving a new receipt

- S03-1 Frontend: Get values of the fields in the receipt structure layout.
- S03-2 Frontend: Create a new receipt structure from the field values.
- S03-3 Frontend: Send receipt saving request with the newly created receipt structure to backend.
- S03-4 Backend: Store the receipt structure in the database.
- S03-5 Frontend: Destroy the receipt structure layout.

Discarding a new receipt

S04-1 Frontend: Destroy the receipt structure layout.

Viewing existing receipts

S05-1 Frontend: Send receipt keys query request to backend.

S05-2 Backend: Fetch the keys for all stored receipts.

S05-3 Backend: Send receipt keys to frontend.

S05-4 Frontend: Sort the fetched keys.

S05-5 Frontend: Display the sorted keys in list layout.

Viewing an existing receipt

S06-1 Frontend: Send receipt request with a receipt key to backend.

S06-2 Backend: Fetch receipt structure associated with the key.

S06-3 Backend: Send receipt structure to frontend.

S06-4 Frontend: Display receipt structure in uneditable-field receipt structure layout.

Deleting an existing receipt

S10-1 Frontend: Send receipt deletion request with a receipt key to backend.

S10-2 Backend: Delete receipt structure associated with the key.

S10-3 Frontend: Destroy the receipt structure layout.

Viewing spending log

- S11-1 Frontend: Send spending log request to backend.
- S11-2 Backend: “Select when, item_description, item_price from receipt join item on receipt.id = item.receipt order by when”.
Expected result: spending log structure.
- S11-3 Backend: Send spending log structure to frontend.
- S11-4 Frontend: Display spending log structure in spending log structure layout.