

VISHWAKARMA INSTITUTE OF TECHNOLOGY.

(An autonomous institute to university of Pune)



Report on

“ANDROID APPLICATION: X-Split”

Guided by

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VISHWAKARMA INSTITUTE OF TECHNOLOGY,PUNE.

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CERTIFICATE

This to certify that,

"E12" group of computer engineering mini project, studying in TE computer department IIND shift has successfully completed project report on

"ANDROID APPLICATION: X-Split"

On 22 Nov.2014 under the guidance of Prof. G.D.BHUTKAR

PROJECT GUIDE

Prof. G.D.BHUTKAR

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ACKNOWLEDGEMENT

- **We take this great opportunity to thank everyone who has contributed to our project in some or the other way.**
- **We would firstly like to thank the H.O.D. of computer department Prof. S.B.Karthik for letting us get this great opportunity to test our skills.**
- **Special thanks to Prof. G.D.Bhutkar sir for his guidance in developing this project.**
- **Our sincere thanks and gratitude towards the faculty of our college for their kind cooperation.**
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1. Introduction

X-split is an android application, which is used to split the expenses whenever any complex calculations are involved.

When we go out for trip or tour, the money spend needs to be divided either equally or unequally among all the individuals. So this will require calculations and if calculations goes wrong somewhere in the middle we again need to start from beginning which would lead to irritation and frustration.

So keeping this in mind we have created this android application which would do all complex calculations in seconds and hence you will still be smiling at the end of your trip.

We have experienced this type of situation where this calculation part lead to irritation amongst many of us.

Following are the two complex case studies which will give you a proper idea of what our android application program really does.

2. Case Studies:

Case Study 1:

Trip of 7 members

1. Paras
2.Niranjan
3.Amita
4.Aakash
5.Aishwarya
6.Vedika
7.Yash

Expenses:

1. Car - 300 Rs per person

$$\text{Total Cost} = 300 * 7 = 2100 \text{ Rs}$$

Paid By 3 persons

1. Paras	700
2.Niranjan	500
3.Amita	900

2. Parking Charges - 70 Rs.

Paid By:

Yash	70
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3. LimbuSharbat (Out of 7 peoples 5 peoples took) – 50Rs

Paid By:

1. Paras	20
2.Niranjan	20
3.Amita	10
4.Aakash	00
7.Yash	00

4. Water Bottle (7 bottles among all) - 140 Rs.

Paid By

1. Amita	100
2. Vedika	40

5. Breakfast - 210 Rs

All members individual share is different

Individual Share:

1. Paras	25
2.Niranjan	35
3.Amita	30
4.Aakash	40
5.Aishwarya	20
6.Vedika	25
7.Yash	35

Paid By:

1. Paras	55
2.Aakash	45
3.Aishwarya	60
4.Yash	50

6. Lunch - 830 Rs

Individual Share:

1. Paras	110
2.Niranjan	130
3.Amita	90
4.Aakash	140
5.Aishwarya	130
6.Vedika	120
7.Yash	110

Paid by:

1.Amita	400
2.Vedika	200
3.Yash	230

7. Soda - 5 People took - 150 Rs.

Paid By:

1. Paras	50
2.Niranjan	50
3.Aakash	00
4.Aishwarya	50
5.Yash	00

8. Shopping (3 peoples involved in shopping) - 760 Rs.

Individual Share:

1.Amita	160
2.Aishwarya	270
3.Vedika	330

Paid By:

1.Amita	330
2.Vedika	430

9. Meal (5 people) - 140 Rs.

Individual Share

1. Paras	25
2.Amita	35
3.Aakash	25
4.Aishwarya	35
5.Yash	20

Paid By:

1.Aakash	110
2.Aishwarya	30

Total Cost = 2100+70+50+140+210+830+150+760+140=4450Rs

Total Money Given By individual:

1. Paras	700+0+20+0+0+0+50+0+0	770
2.Niranjan	500+0+20+0+55+0+50+0+0	625
3.Amita	900+0+10+100+0+400+0+330+0	1740
4.Aakash	0+0+0+0+45+0+0+0+110	155
5.Aishwarya	0+0+0+0+60+0+50+0+30	140
6.Vedika	0+0+0+40+0+200+0+430+0	670
7.Yash	0+70+0+0+50+230+0+0+0	350
Total Cost		4450 Rs.

Actual Amount To Be Given By Individual

1. Paras	$300+10+10+20+25+110+30+25$	530
2.Niranjan	$300+10+10+20+35+130+30$	535
3.Amita	$300+10+10+20+30+30+90+160+35$	655
4.Aakash	$300+10+10+20+40+140+30+25$	575
5.Aishwarya	$300+10+20+20+130+30+270+35$	815
6.Vedika	$300+10+20+25+120+330$	805
7.Yash	$300+10+10+20+35+110+30+120$	535
Total Cost		4450

	Amount To Get Back	Amount To Be Given
1. Paras	240	00
2.Niranjan	90	00
3.Amita	1085	00
4.Aakash	00	420
5.Aishwarya	00	675
6.Vedika	00	135
7.Yash	00	185

Select the minimum amount from above cases and complete transactions.

1. Vedika will give 90 Rs to Nirranjan

Vedika remains with 45.

2. Vedika will give $45 + 185$ from Yash $+10$ from Aakash= 240

Amount to be given to Paras.

Remaining amount for Aakash = 410 .

3. Aakash will give $410 + 675$ from Aishwarya = 1085

Amount to be given to Amita.

Case Study 2:

Trip of 5 members

1. Aditya
2.Nishant
3.Shriya
4.Tanay
5.Raj

Expenses:

1. Bus - 200 Rs per person

$$\text{Total Cost} = 200 * 5 = 1000 \text{ Rs}$$

Paid By 3 persons

1.Tanay	400
2.Nishant	100
3.Shriya	500

2. Entry Fees -50 Rs. Each Total Cost=250 Rs

Paid By :

1.Aditya	100
2.Raj	150

3. Breakfast – 30 Rs each, Total Cost=150 Rs

Paid By:

1. Aditya	00
2.Nishant	20
3.Shriya	50
4.Tanay	10
5.Raj	70

3. Lunch – 130 Rs each, Total Cost=650 Rs

Paid By:

1. Aditya	250
2.Nishant	100
3.Shriya	00
4.Tanay	00
5.Raj	300

5. Shopping (3 peoples involved in shopping) - 1800 Rs.

Individual Share:

1.Shriya	450
2.Aaditya	600
3.Raj	750

Paid By:

1.Shriya	700
2.Raj	1100

6. Return Bus - 220 Rs per person

Total Cost=220*5=1100 Rs

Paid by 3 persons:

1.Tanay	250
2.Nishant	350
3.Raj	500

7. Mid-Day meal - 160 Rs

All members individual share is different

Individual Share:

1. Aditya	40
2.Nishant	35
3.Shriya	30
4.Tanay	25
5.Raj	30

Paid By:

1. Shriya	90
2. Aditya	70

Total Cost=1000+250+150+650+1800+1100+160=5110 Rs.

Total Money Given By individual:

1. Aditya	0+100+0+250+0+0+70	420
2.Nishant	100+0+20+100+0+350+0	570
3.Shriya	500+0+50+0+700+0+90	1340
4.Tanay	400+0+10+0+0+250+0	660
5.Raj	0+150+70+300+1100+500+0	2120
Total Cost		5110 Rs.

Actual Amount To Be Given By Individual

1.Aditya	200+220+50+30+130+600+40	1270
2.Nishant	200+220+50+30+130+35	665
3.Shriya	200+220+50+30+130+450+30	1110
4.Tanay	200+220+50+30+130+25	655
5.Raj	200+220+50+30+130+750+30	1410
Total Cost		5110 Rs

	Amount To Get Back	Amount To Be Given
1. Aditya	00	00
2.Nishant	00	95
3.Shriya	230	00
4.Tanay	05	850
5.Raj	710	00

Select the minimum amount from above cases and complete transactions.

1. Nishant will give 5 Rs to Tanay

Nishant remains with 90.

2. Nishant will give $90 + 140$ from Tanay =230

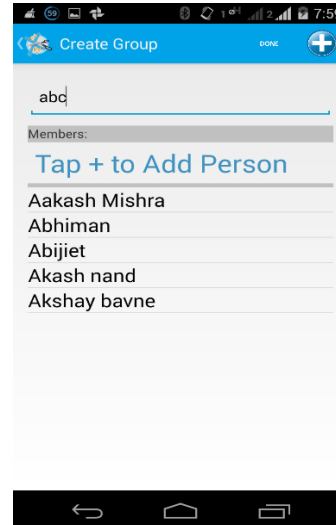
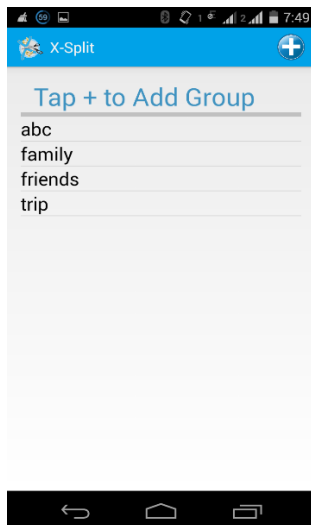
Amount to be given to Shriya.

Remaining amount for Tanay =710.

3. Tanay will give 710 to Raj

3. Description

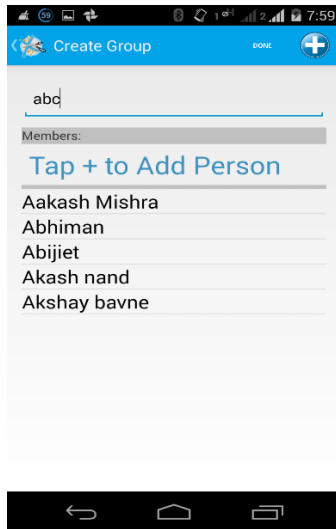
1. For Creating a Group:



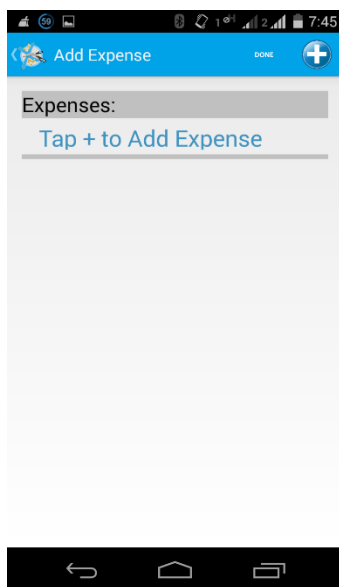
This is the main page of our application. It includes all groups that are created by user. If anyone wants to add group then user needs to tap + button. After tapping on + button then user need to write group name and after that user needs to add contacts.

2. For Adding group members:

For adding group members in particular group ,user need to tap on + button ,after tapping on + button contacts will be retrieved ,then user need to select particular contacts. After adding all contacts user need to tap on done button.



3. For Adding Expenses:



For adding expenses user need to tap on + button after tapping on + button ,user need to type expense name and total cost .

In splitting expenses we have two cases equally split or unequally split, if user tap on unequally split then user need to give particular share for each member in the corresponding group.

And also user needs to provide paid amount by clicking on paid.

A) Split Equally:

The screenshot shows the 'Create Expense' screen. The expense is labeled 'Breakfast' with a value of 400. The 'Split' is set to 'Equally' and the 'Paid By' field is empty.

Breakfast

400

Split: Equally

Paid By:

The screenshot shows the 'Payer' screen with a 'Done' button at the top. Below it, the list of payers and their shares is shown:

Payer	Share
Prasad Joshi Sir	400
A D. Kulkarni	Rs. 0.00
Aaditya	Rs. 0.00
Abhiman	Rs. 0.00

B) Split Unequally:

The screenshot shows the 'Create Expense' screen. The expense is labeled 'lunch' with a value of 600. The 'Split' is set to 'Unequally' and the 'Paid By' field is empty.

lunch

600

Split: Unequally

Paid By:

The screenshot shows the 'Share' screen with a 'Done' button at the top. Below it, the list of payers and their shares is shown:

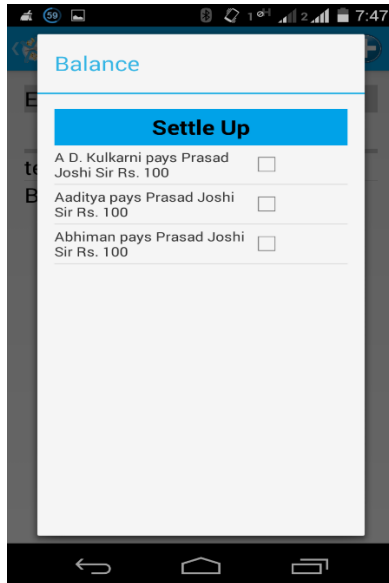
Payer	Share
Prasad Joshi Sir	100
A D. Kulkarni	250
Aaditya	150
Abhiman	100

The screenshot shows the 'Payer' screen with a 'Done' button at the top. Below it, the list of payers and their shares is shown:

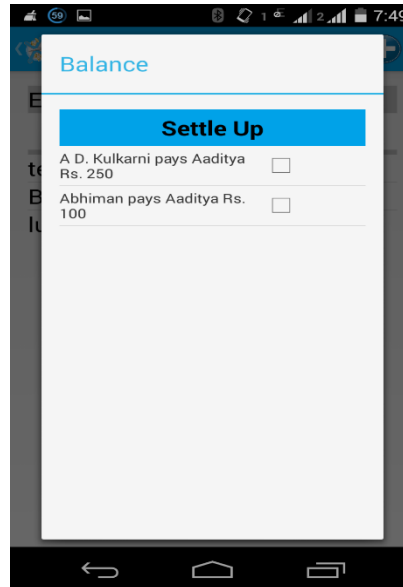
Payer	Share
Prasad Joshi Sir	100
A D. Kulkarni	Rs. 0.00
Aaditya	500
Abhiman	Rs. 0.00

4. Settle Up:

A) Equal:



B) Unequal:



After adding expenses, finally user gets who will pay another member how much money and user can settle the transactions.

4. PROBLEMS FACED AND SOLUTIONS

1. Problems faced in understanding DBMS concepts as the course has yet not been taught.
2. Lack of resources such as powerful machines etc.
3. Working in team created redundancy.

Solutions:

Referred books and internet.

5. CONCLUSION& FUTURE SCOPE

5.1 CONCLUSION

In this hectic world nobody has that much time to invest in this complex calculations. So the complex calculation can be done in seconds with ease and at a very good comfort level using this application. No need of calculations to be done manually.

5.2 FUTURE SCOPE

1. We will add connectivity option for users to interact with each other (eg. SMS, e-mail, cloud database).
2. Users will be able to upload images to avoid any dispute.
3. Advanced GUI which will include animation etc.
4. Add some new features to the app.

References

1. www.google.com
2. developer.android.com
3. www.w3schools.com
4. www.stackoverflow.com