



High performance. Delivered.

Accenture Women Hackathon 2015

Team Chip-Bin Presents



consulting | technology | outsourcing



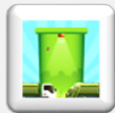


garboClean

dump cleaner for smart cities

garboClean is a waste monitoring solution that saves **time, money and environment**. It uses sensors to measure and forecast the fill-level of waste containers and generates **smart routes** to guide BBMP drivers. It features real time updates and **analytics modules** for smart planning for BBMP Managers





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Features

- Easy to use App which supports both **Android** and iOS.
- Increased fleet efficiency
- **Optimal route** resulting in time and cost savings
- **Real time** fill and humidity status
- Predicted fill up dates
- Statistics
- Alerts



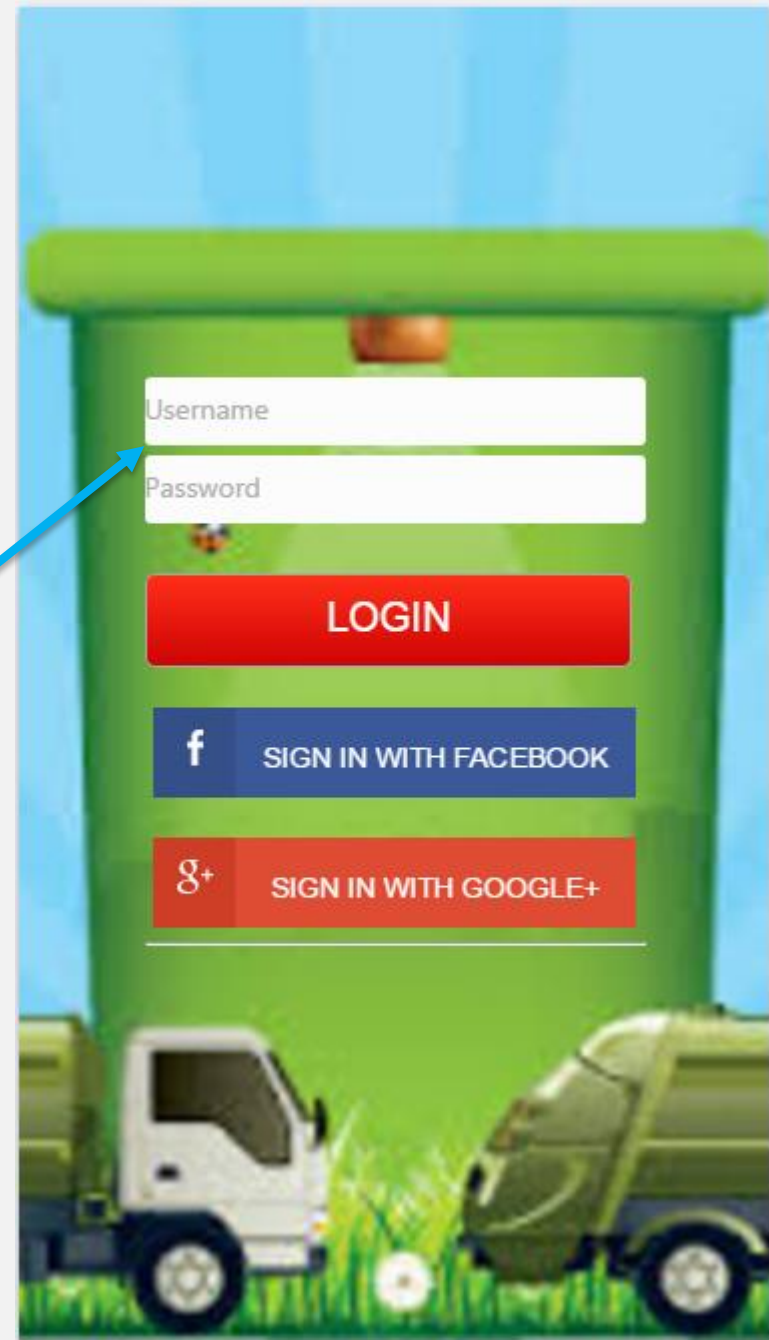
Success factor

- **Zero cost** **Heuristic algorithm-****minimum** spanning tree for optimal route search
- **Location /zone based** labelled Bins for quick identification of Bins and improve speed of app.
- **Intuitive graphs** for analysis
- Low cost backend service provided using go daddy

How does it work ?

Login using your BBMP Registered email or your gmail / facebook login

App supports **Driver** and **Supervisor**
Login





Driver Module

- Search based on Location /zone to get the Bins in the area
- **View** Bin fill level and location details
- get Optimal route for clearing filled bins
- User can choose between 2 separate routes



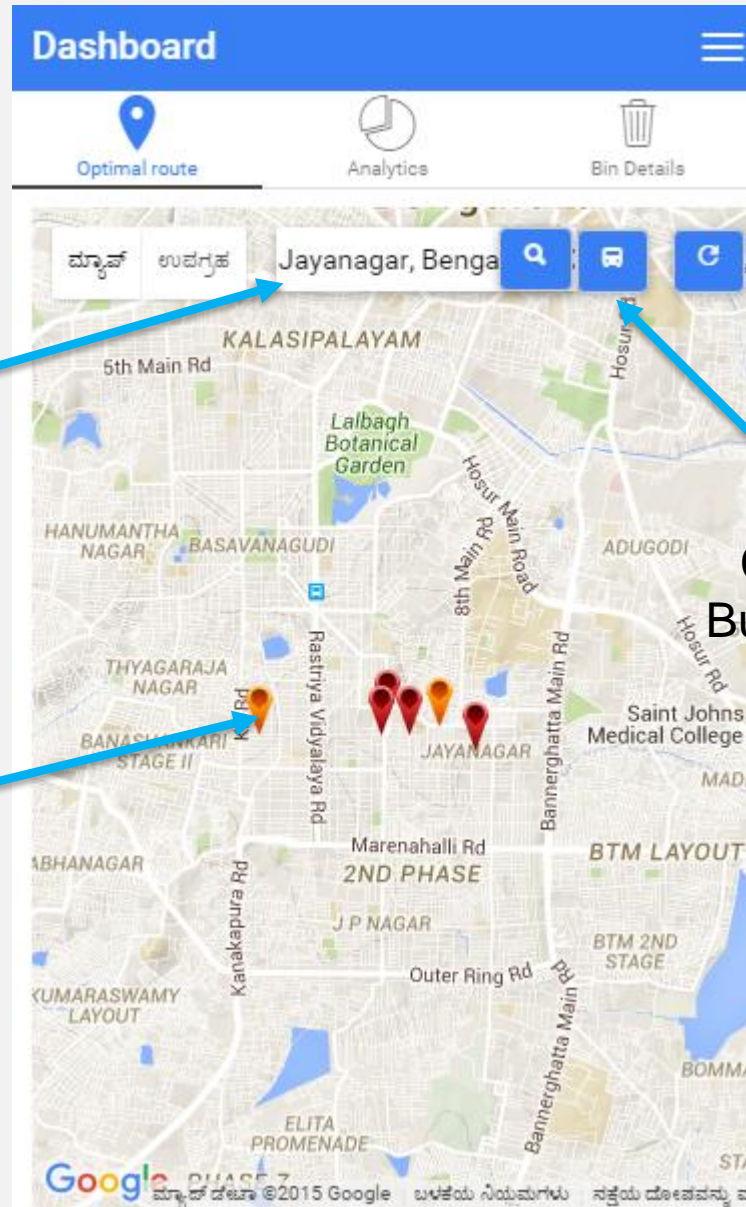
Supervisor Module

- Same features as Driver Module
- Additionally can access Analytics module for comparative analysis on fill trends and empty trends of bins to help with predictive planning
- View Bin details to analyse **temperature/humidity** for a week or custom period to help understand bin trends and help take effective decisions
- Analytics graphs to help Supervisor understand trends take preventive measures and stay abreast of fleet concerns/ issues





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Type zone /Location
and Search to get the
Bins

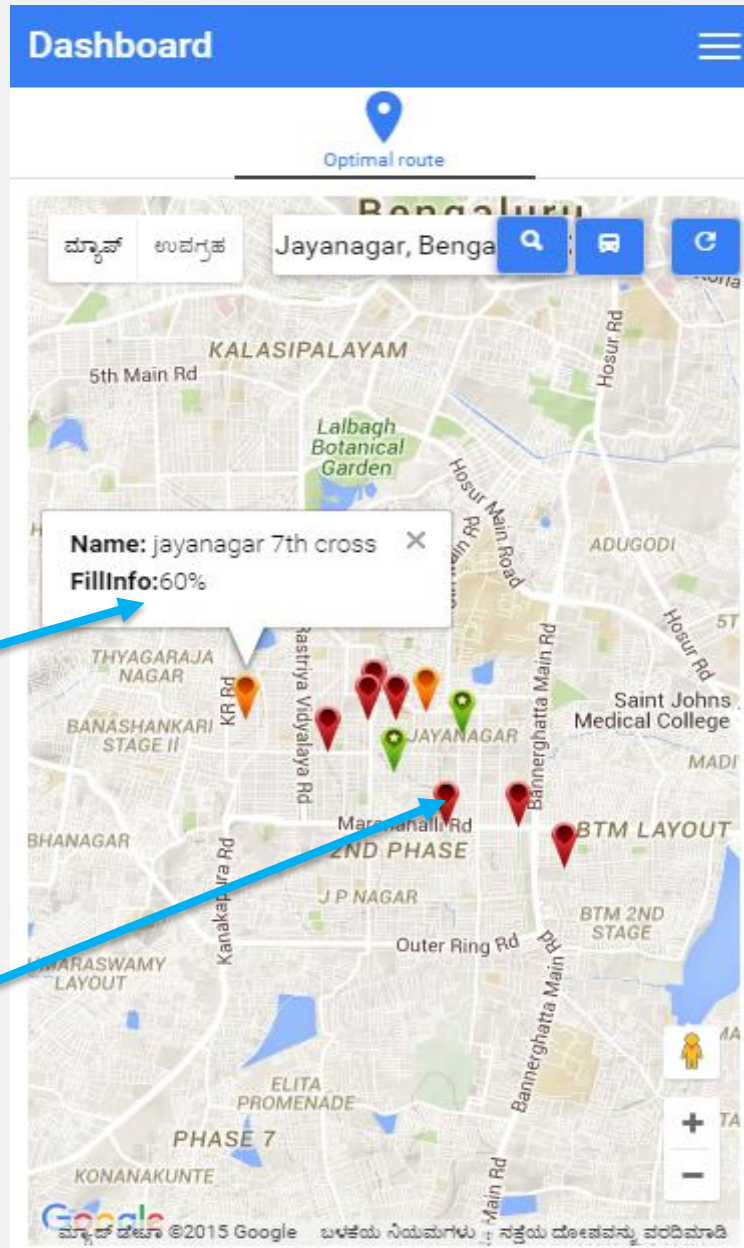
Click on the
Bus Icon to get
the Route

Bins in your selected Zone is
shown with real time fill levels.
Color **Red** bin indicates high
fills





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Hover to get Bin
Details

click on Bin to
go to Bin
Details screen

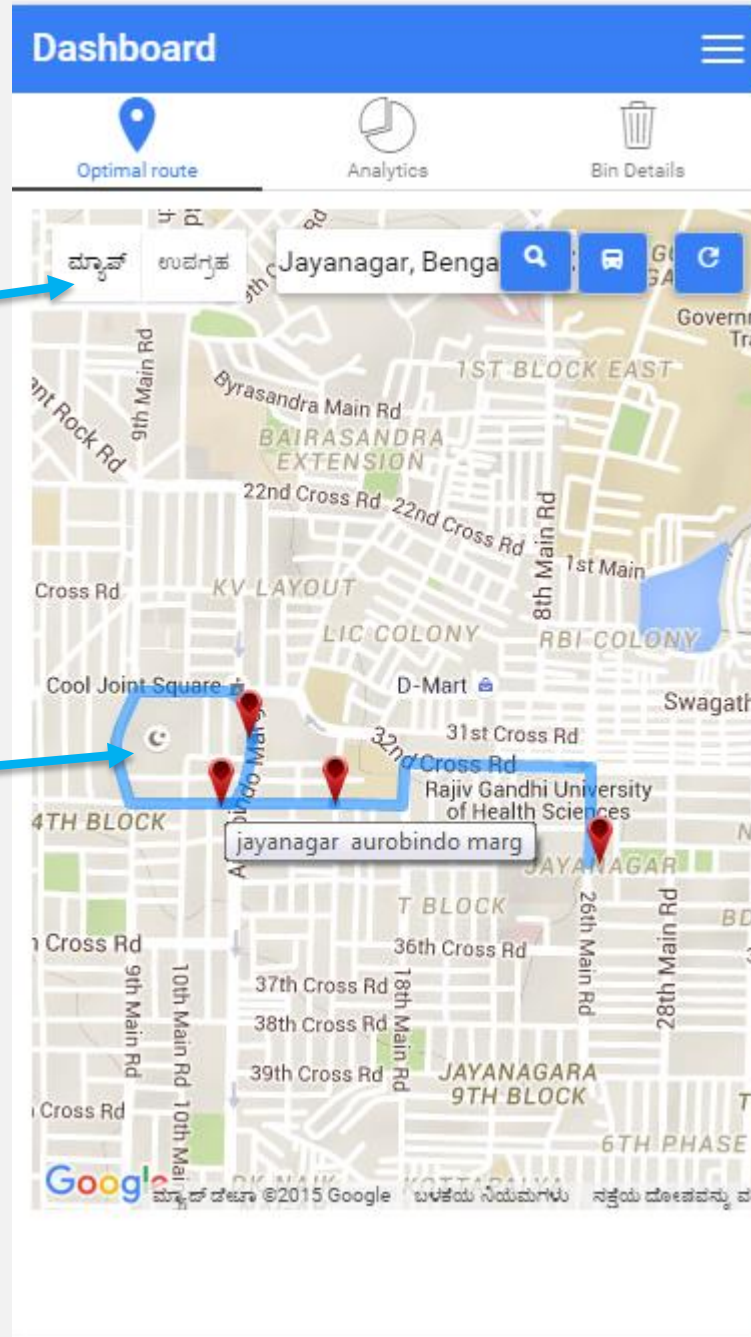




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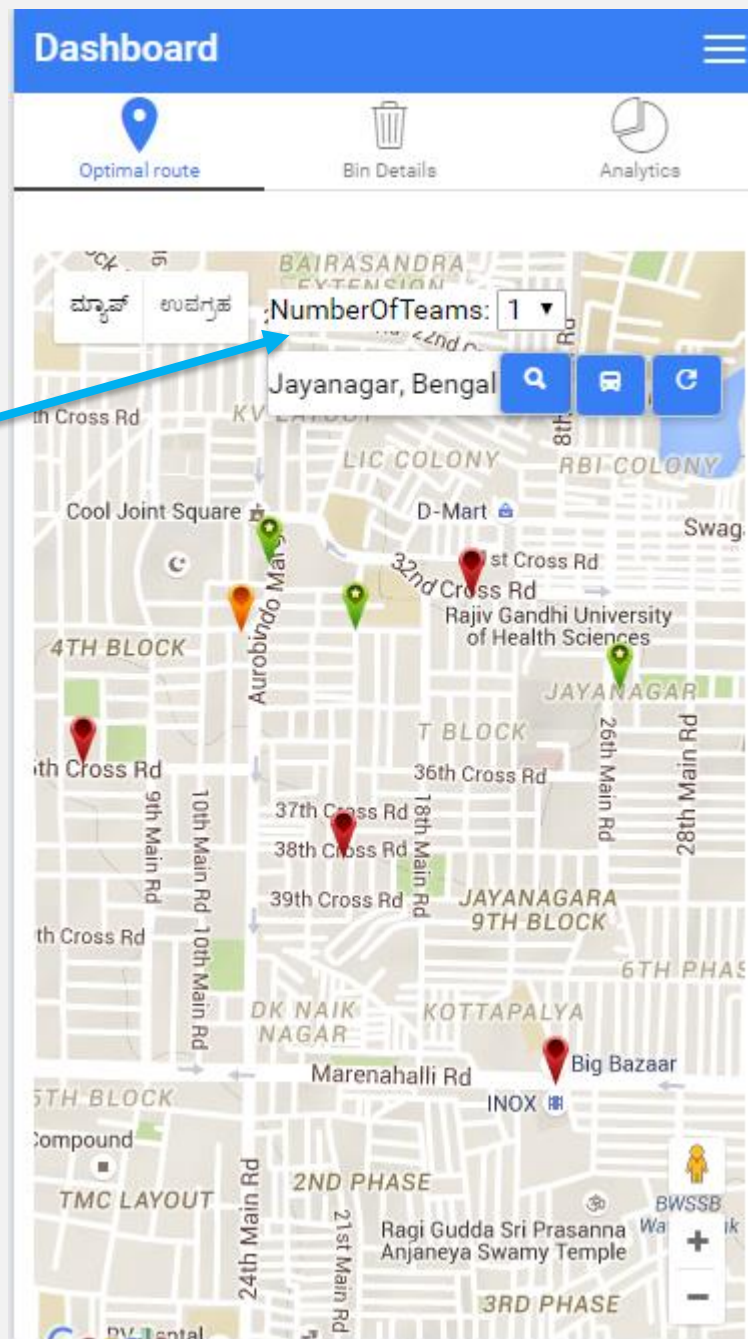
Localized to
Kannada for
BBMP

Get optimized route
to pick only filled
bins





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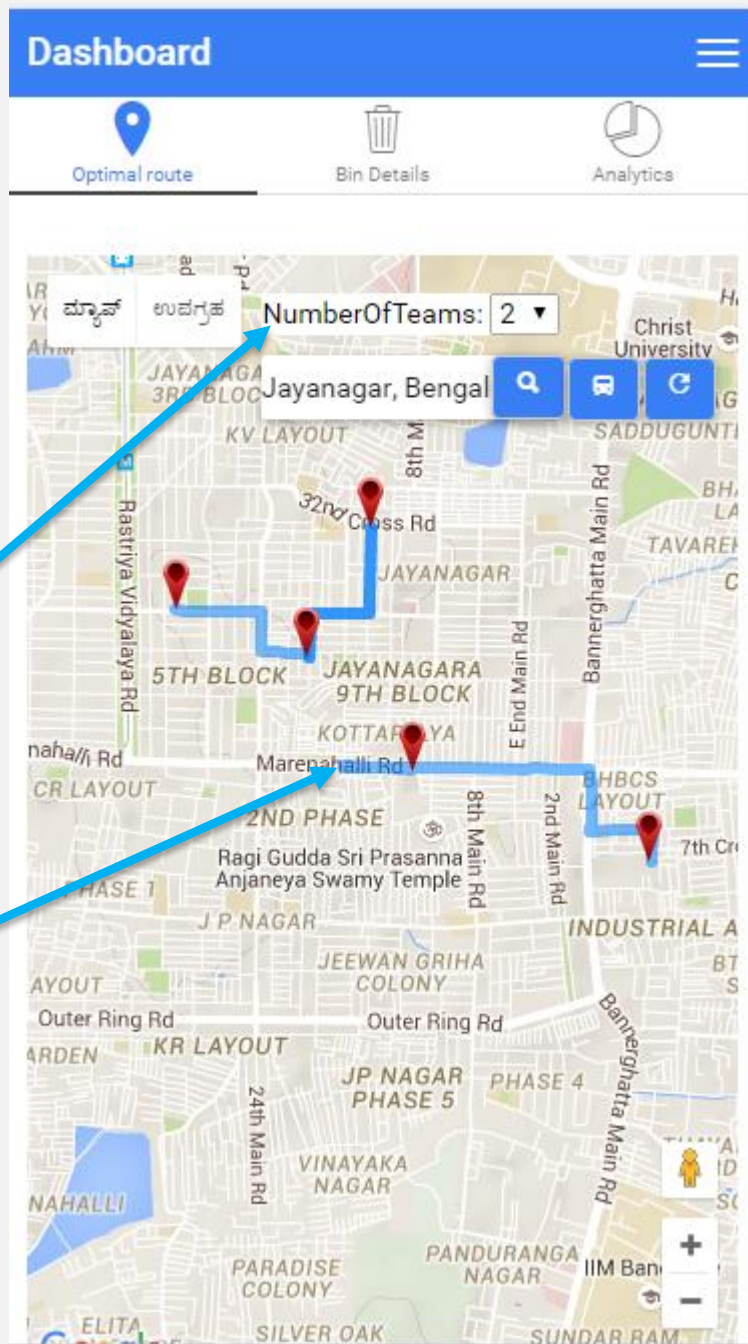


Select NumberofTeams from drop down to get split routes for Teams





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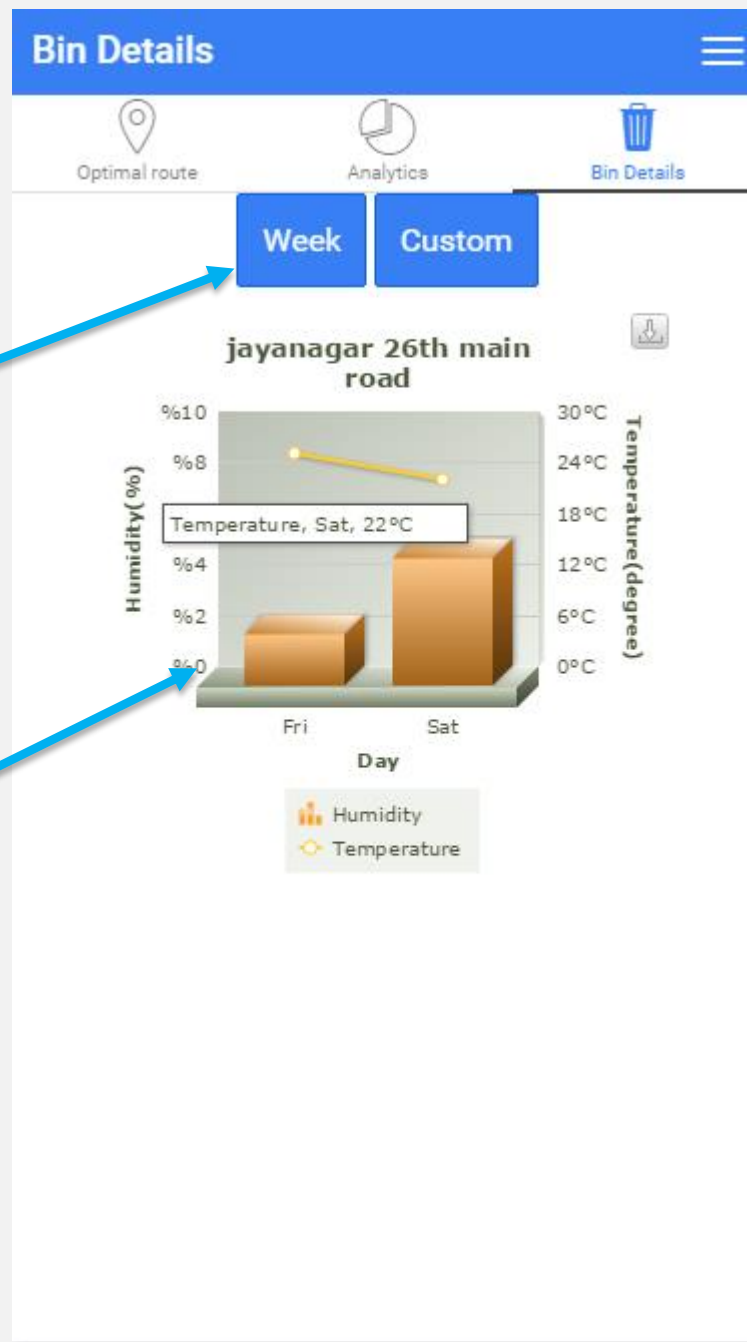


Two separate routes are generated when Number of Teams is set as 2





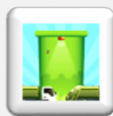
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You can view weekly statistics or for a custom period

View real time Bin Temperature and Humidity levels





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Bin Details

Optimal route

Analytics

Bin Details

Week

Custom

jayanagar 26th main road

From

October/01/2015

TO

October/02/2015

Get Graph

jayanagar 26th main road

From October/01/20...

Days	Humidity(%)	Temperature(°C)
Thu	~15%	~20°C
Fri	~85%	~90°C

Humidity(%)

Temperature(°C)

Days

Humidity

Temperature

Analytics is available for Supervisors

Generate analytics/ for the Bin for any Period

Bin Details

Optimal route

Analytics

Bin Details

Thursday

OCT

1

2015

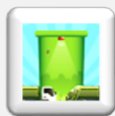
October 2015

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

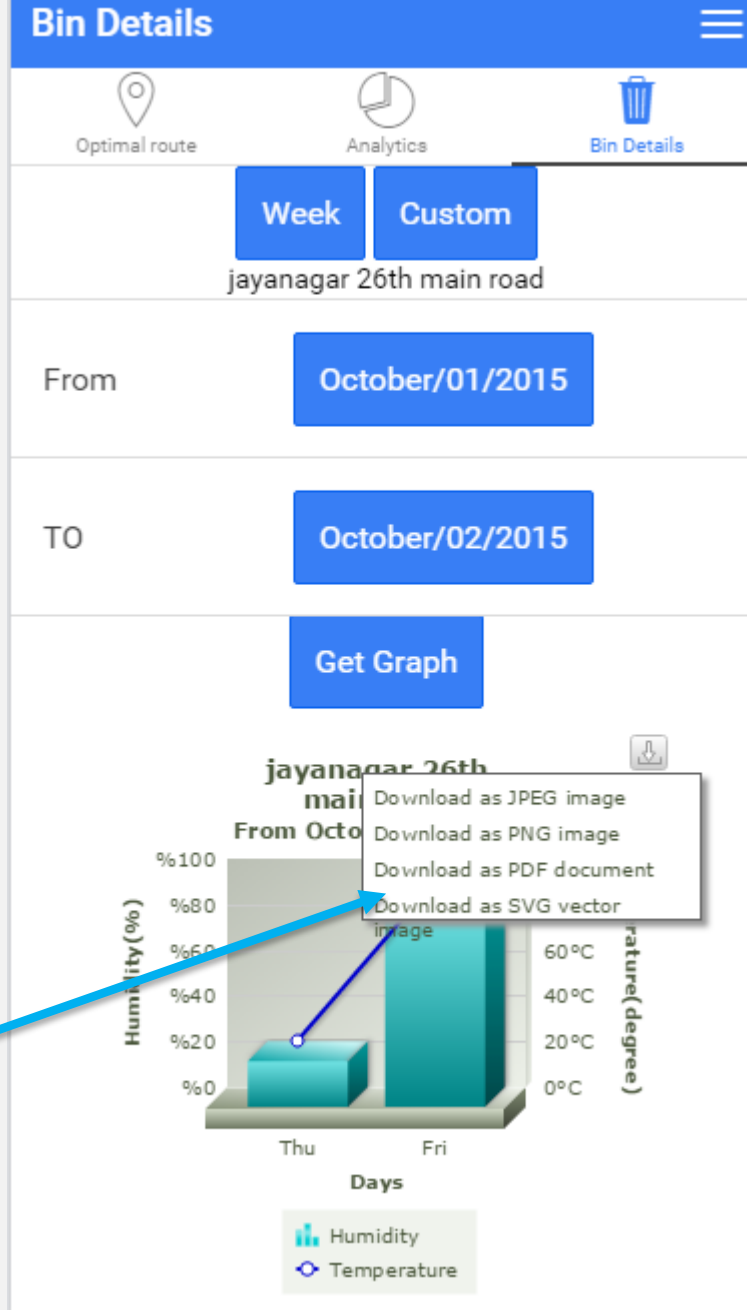
CANCEL

OK

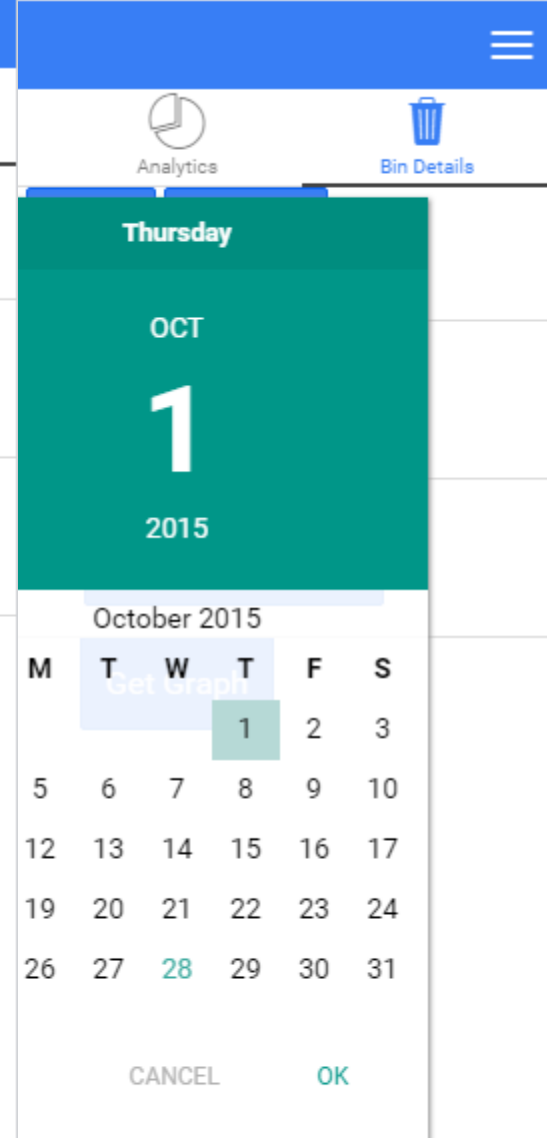


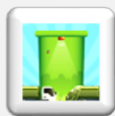


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Ability Download
reports





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← Export

Optimal route

Analytics

Bin Details

jayanagar 26th main road

From October/01/20...

Humidity (%)

Temperature (degree)

100%

80%

60%

40%

20%

0%

100°C

80°C

60°C

40°C

20°C

0°C

Thu

Fri

Days

Humidity

Temperature

TO

Subject

Body

milonishah01@gmail.com

Graph details

Please find the graph

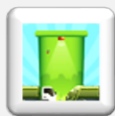
Send

DashBoard

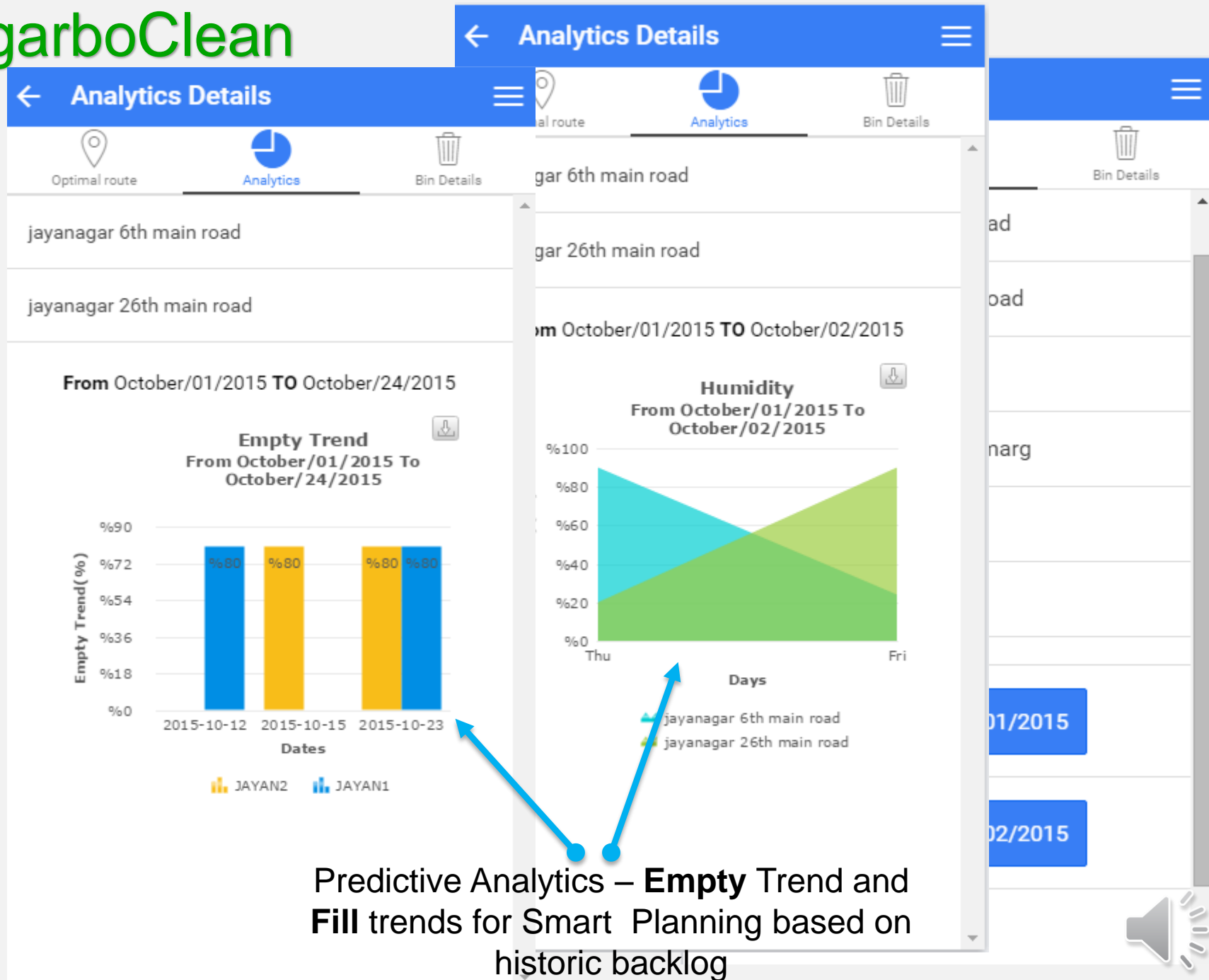
Export

SignOut

Email reports



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Thank You!



Appendix



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- Please refer to **Chipbin Solution Blueprint** in gitHub code repository for Technical Details and Database setup

