

# #ZivHack

November 15 - 16, 2014

*zivame*

in association with



## Wifi

Username: zivhack

Password: zivhack2014

# Welcome

Welcome to #ZivHack!

Below are few house rules and we would appreciate your cooperation.

## **Cleanliness**

Rooms, food, drinks and technical infrastructure will be provided, please use their equipment with respect and tidy up after yourself.

## **Hacking etiquette**

Please use the provided internet connection in a legally fitting manner. Don't hack into secured resources or download illegal media content. If we find out about misuse we will disqualify you and your team. In the case of severe misdoing we will bring you to the attention of the authorities.

## **Premise Rules**

There will be restrictions on accessing certain parts of the building (e.g. server rooms) so please be respectful and avoid those areas.

## **Common sense etiquette**

No force, violence, stealing will be tolerated.

Be thoughtful in the spirit of innovation and inclusiveness, there may be minors participating in the event, any content should not contain explicit content.

Be respectful to others.

Behave professionally. Remember that harassment and racist, sexist, or exclusionary jokes are not appropriate for this event.

Attendees violating these rules may be asked to leave the Hackathon at the sole discretion of the Hackathon organizers.

## **Be Awesome & Have Fun**

Hack, meet new people, get creative, and have a good time. Getting something meaningful done within such a short amount of time can be stressful, but we'd like to encourage everyone to take a break every now and then to relax and enjoy the event.

# Problem Statements

## Problem A

### Responsive Mobile Site

#### Build

A responsive optimized mobile store. Build a category page, product page and a cart page.

#### Product Attributes:

- Main image
- Other images
- Categories (can be many)
- Price (MRP)
- Special Price (discounted price)
- Description
- Size (multiple)
- Color (can be multiple per size)
- Inventory (has to be per color, which is in turn per size)

#### Category Attribute:

- Name

#### Technology

Node.js (preferred) / PHP / Python / Java

#### Database

Use a NoSQL database like MongoDB

#### Judging Criteria

Choice of Architecture

NoSQL Schema

Application Performance

## Problem B

# Rule Engine

### Build

A Rule Engine from scratch (do not use any available open source rule engine). We are expecting a User Interface for entering the rules.

### Database schema

The sample database schema is given below

```
table_category
    category_id
        int(11)
    category_name
        varchar(100)

table_product
    product_id
        int(11)
    product_name
        varchar(100)
    product_price
        decimal(8,2)
    product_special_price
        decimal(8,2)

table_product_category
    f_product_id
        int(11)
    f_category_id
        int(11)
```

### Input

The input to the rule engine is a set of products with its categories and special price.

The rule engine needs a set of conditions and a set of actions listed below.

### Conditions

- Cart total
- Category id

### Exclusions:

- Category id

### Actions

- Free Shipping
- % Discount
- Flat Discount
- Free Product

The conditions and exclusions can be grouped via brackets.

### Samples

Input:

```
[
  {
    "product": {
      "id": "<product id>",
      "category_id": [
        "<comma separated category ids>"
      ],
      "price": "<special price of product>"
    }
  },
  {
    "product": {
      "id": "<product id>",
      "category_id": [
        "<comma separated category ids>"
      ],
      "price": "<special price of product>"
    }
  }
]
```

## Rule

```
IF
    "cart total" [>/<] "predefined value"
    AND/OR
    "category is" [is] "predefined value"
    AND/OR
    "category id" [not] "predefined value"
THEN
    [free shipping || %discount = "predefined value" || discount = "flat
    discount value" || free product = "product id"]
```

## Example rules:

### Rule 1

```
IF
    {cart_total > 1000 AND category_id in "200,201,200"}
THEN
    {%discount = "20"}
```

### Rule 2

```
IF
    {cart_total > 5000}
    OR
    {cart_total > 3000 AND category_id NOT IN "200,201,202"}
THEN
    {discount = "1000"}
```

## Judging Criteria

Correctness

Choice of algorithm(s)

## Submission Guidelines

Direct your project to [submissions+zivame@venturesity.com](mailto:submissions+zivame@venturesity.com) in the following format:

**Name :**

**Link(s) to the application** (zipped source code hosted on the web AND/OR github repository url AND/OR

deployed application link) :

**Usage instructions :**

# We can't wait to see what you create!

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