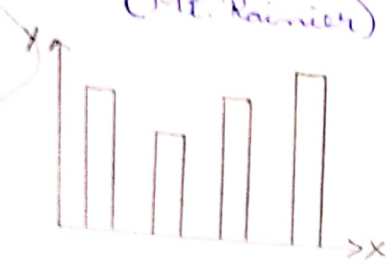
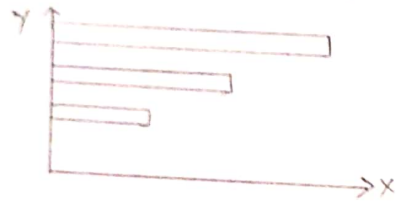
SHEET 1 : BRAINSTORMING

Ideas: Dataset - Climbing stats (2010 - 2015)
(Mt. Rainier) - Weather stats (2014 - 2019)



Bar Chart
- To display number of attempts, succeeds and failed attempts per year / month / day.
- To display weather stats per month / day

Line Chart
- To display success / failure rate for routes per month or day
- To display success / failure rate per year / month / day
- To display average of weather aspects



Horizontal Bar Chart
- To display routes vs attempts

Pie Chart
- To know which route is taken the most

Helping Text / Intro Text / Narrative

Map — To show Mt. Rainier's location

Time Range selector — Time Range selector

or — Radio Button / Check Box

Drop down list — Drop down list

(Hover or Tooltip) — Highlight & Hover or Tooltip

Correlation Plot

Tabular data

Filtering Ideas:
- Time range selector won't required for this kind of data.
- Less / No overlap between climbing and weather stats. Drop correlation.
- Tabular data also won't serve any purpose.
- Success rate, attempts, routes and weather stats have yearly, monthly & daily granularity.
- Pie chart not good compared to Bar chart

Categorise:
- Map
- Types of bar charts
- Line charts
- Hover & highlight
- Tooltip

Combine & Refine:
- Can combine attempts & success rate per year / month / day.
- Attempts & rate, routes, weather parameters — all segregated.
- Tool tips help display stats when hovered over line / bar charts.

Question:
\+ Clear segregation of visualisations as per elements
\+ Enough interactivity
\- No querying for data
-/+ No sophisticated visualisation

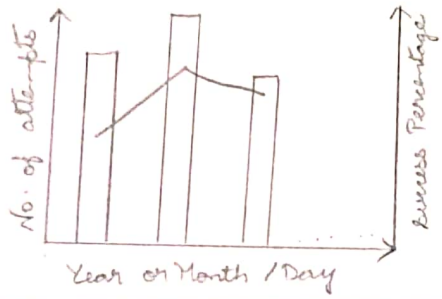
SHEET 2 : DESIGN

Layout :

①

Mt. Rainier Picture	
Intro text	Map or Overview or Facts

②



- Yearly
- Monthly
- Daily

Observation Text

Operations :

① The user can see and read intro text and know few things about Mt. Rainier.

② User can see the trend on a yearly / monthly / daily basis. Upon hovering onto chart, it will show stats.

Discussion :

+ Simple UI
+ User is introduced about Mt. Rainier with knowledge and plots
+ Observation text will help user understand the plot.
- Not much interactivity except for display of stats when hovered over chart

Focus :

① Starts with intro text and some overview — gets user interested.

② Combines both number of attempts and success percentage per yearly / monthly / daily granularity level.

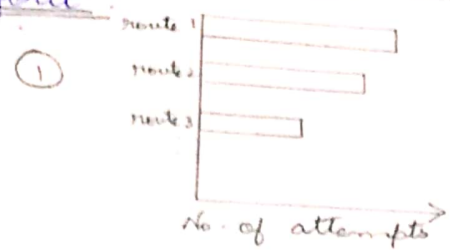
Title : Design V1

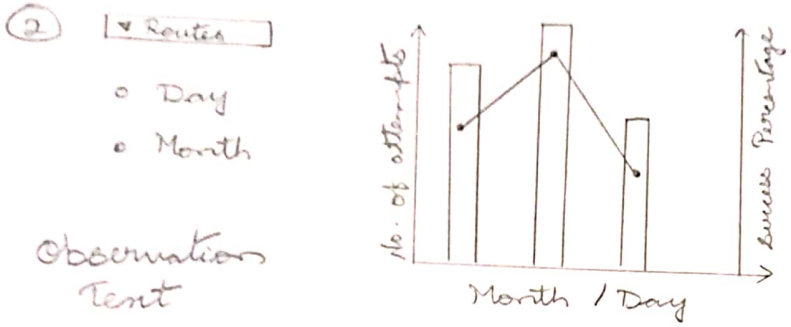
Author : Shankar Paramatma Veruva

Date : 06/06/2020

SHEET 3 : DESIGN

Layout :





Observation Tent

Operations :

① User can hover over the chart area to get stats.

② User has to select the route he/she wants to see and set monthly/daily granularity to view the chart

Discussion :

+ Good interactivity options
+ No complexity. Easy to understand
+ Good information on routes
− User with no knowledge or interest - wouldn't know what this is.

Focus :

① Different types of routes taken to climb Mt. Rainier and the number of attempts per route

② Taking a look at the number of attempts and success percentage per route at a monthly or daily granularity.

Title : Design V2

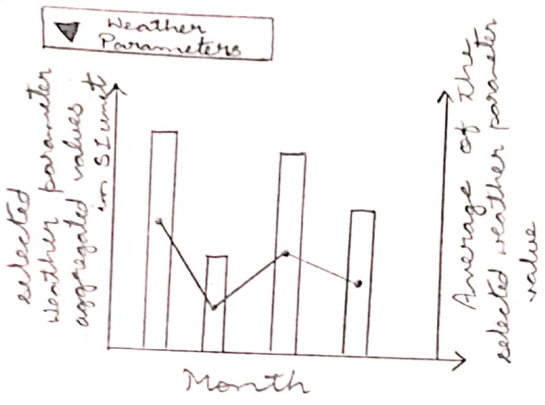
Author : Shankar Paramatma Veruva

Date : 06/06/2020

SHEET 4 : DESIGN

Layout :

①



Observation Tent

Focus :

① This shows the trend for the selected weather parameter at monthly granularity. It also shows average value for each month of the selected weather parameter.

Operations :

① The user has to select a weather parameter he/she wants to see. The user can also hover over the chart to view specific details.

Discussion :

+ Instead of displaying all weather parameters at a go, this gives control to the user — viewing one at a time.
+ Observation tent will help user to note important points.
− Only one view at a time. User has to select each time.

Title : Design V3

Author : Shankar Paramatma Veruva

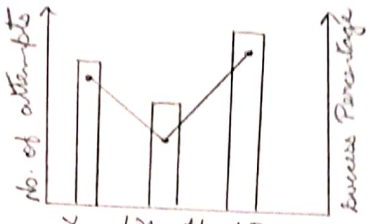
Date : 06/06/2020

SHEET 5 : REALIZATION DESIGN

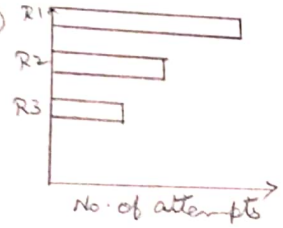
Layout :

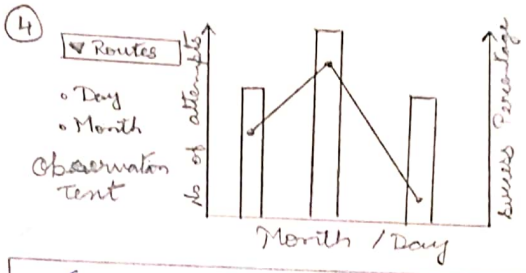
① Mt Rainier Pic

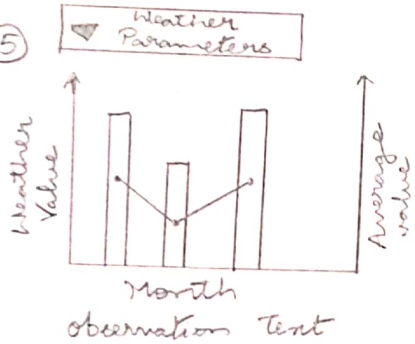
Intro Text	Map / Overview / Facts

② 

○ Yearly ○ Monthly ○ Daily
Observation Text

③ 

④ 

⑤ 

Focus :

① Basic intro about Mt. Rainier.
② No. of attempts & success rate per year / month / day.
③ Types of routes and number of attempts per route
④ Break down of routes at month & day granularity.
⑤ Weather stats per month

Operations :

- User has to go through each tab / page.
- Hover over items to view stats.
- Select granularity level.
- Select weather parameter to display.

Details :

→ Algorithm :
- Track mouse movements
- Filter data based on the user selections from drop down and radio buttons.

→ Dependencies & Requirements :
- Datasets : Climbing & Weather stats
- Platform : R shiny
- Time to build : 2 weeks

Title : Realization Design

Author : Shankar Paramatma Veruva

Date : 06/06/2020