

# Wind, Sea current & Wave height for Safe Berthing & Unberthing at IRPC Port



Guideline Application for Port Master to help decide to plan the berthing and unberthing process.

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## OBJECTIVES & SCOPE

### Implementation

PC application with wind rose graph

### Collect

Ship data & Water Tidal Data

### Reduce

Using some human experience estimation for berthing and unberthing

## FEATURE

### Data Page

Show input & output data

### Graph Page

Show result via graph

### History Data Page

After calculated force, keep & history data

### Morrison Equation

## USER JOURNEY

1

Enter manual ship name, press retrieve ship data and enter other ship data

Ship Data

Retrieve Ship Data

Ship Name

Direction (Deg)

LOA (m)

LBP (m)

Beam (m)

Depth/Height (m)

Displacement (Deadweight + Light Ship) (Ton)

Draft (m)

Freeboard (m)

2

Enter manual wind data/API key

Wind Data

Speed (Knot)

Direction (Deg)

Import OpenWeather API Key

3

Press calculate button

Current Force Calculate

1-3 Hr. API Forecast Force Calculate

4

Check the result via data page and/or graph page

Data Input/Output

Main Graph

Back Up Graph

## TOOLS & TECHNOLOGY

### Tool(s)



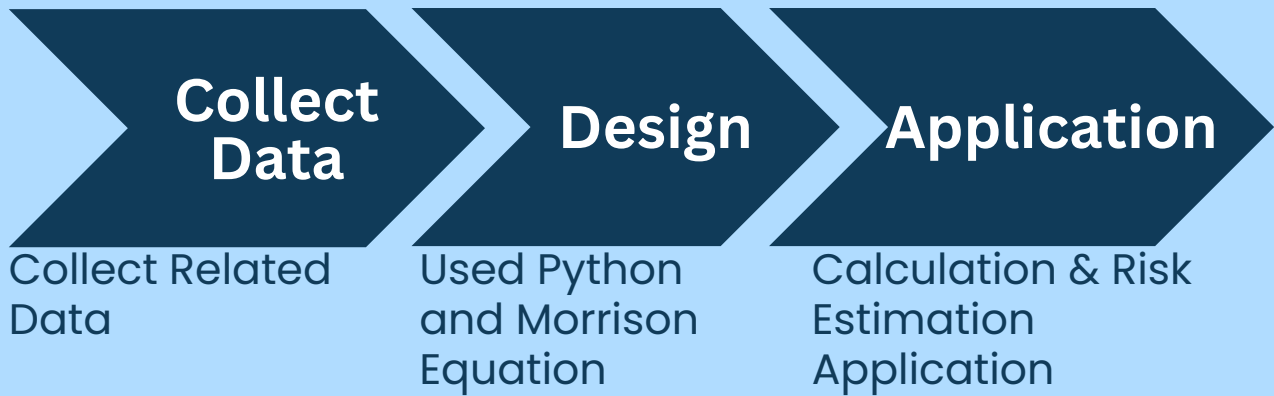
### Backend



### Frontend



## PROCESS



## RESULT

