#### Basic usage:

- 1. Drag and drop Chart prefab into the canvas
- 2. Choose chart type under "Chart" component
- 3. Adjust "ChartOptions" component, this is configuration of chart
- 4. Fill in "ChartData" component, this is data to be displayed
- 5. (Optional) Click "Preview" button to preview the chart.
- 6. Start the game

#### Notes:

- Chart preview will conflict with prefab system, please clear chart preview before you save chart as a prefab/part of a prefab.If you save chart preview as prefab, the chart is still functional at runtime, however you won't be able to refresh that chart preview in edit mode.
- Open "Window / EzChart" window for quickly charts batch processing
- Add "CHART\_TMPRO" to "Player Settings / Other Settings / Scripting Define Symbols" to enable Text Mesh Pro support. Require importing <u>Text Mesh Pro</u> for this.
- Pie chart, rose chart and radar chart will only display positive data

## Scripting:

- A basic chart consists of "Chart", "ChartOptions" and "ChartData" components
- Modify chart.chartOptions to update chart configuration.
- Modify chart.chartData to feed data into the chart.
- When data and options are ready, call chart. UpdateChart() function to update the chart.

#### **Component explanation:**

# Chart Options: configuration of the chart Chart Options - Plot Options:

- Data color (Color array): Colors for chart series data, if number of series is larger then data color length, it will loop over the first color element
- General Font (Font): Font used for the all text elements in the chart
- Inverted (bool): Invert XY axes (if applicable)
- Reverse Series (bool): Reverse series display order
- Mouse Tracking: Track mouse position to highlight chart items and display tooltip
- Column Stacking: Column stacking modes
- Item Highlight Color (Color): Item background color when mouse is hovering the item
- Background Color (Color): Chart background color
- Bar Chart Option:
  - Color By Categories (bool): Set data color by categories instead of by series
  - Bar Width (float): Width of bars
  - Item Separation (float): Separation distance between bars
- Line Chart Option:
  - Point Size (float): Point size for line chart item points
  - Enable Line (bool): Enable/disable lines
  - Line Width (float): Line width for line chart lines
  - Enable Shade (bool): Enable/disable shade under the lines
  - Shade Transparency (float): Transparency of the shade
  - Enable Point Outline (bool): Enable/disable point outline
  - Point Outline Width (float): Width of point outline
  - Point Outline Color (Color): Color of point outline
- Pie Chart Option:
  - Item Separation (float): Separation distance between items
  - Inner Size (float): Size of center hollow circle
  - Outer Size (float): Size of the chart
- Rose Chart Option:
  - Color By Categories (bool): Set data color by categories instead of by series
  - Bar Width (float): Width of bars
  - Item Separation: Separation distance between bars
  - Inner Size (float): Size of center hollow circle
  - Outer Size (float): Size of the chart

- Radar Chart Option:
  - Circular Grid (bool): Use circular grid or polygonal grid
  - Point Size (float): Point size for radar chart item points
  - Enable Line (bool): Enable/disable lines
  - Line Width (float): Line width for radar chart lines
  - Enable Shade (bool): Enable/disable shade
  - Shade Transparency (float): Transparency of the shade
  - Enable Point Outline (bool): Enable/disable point outline
  - Point Outline Width (float): Width of point outline
  - Point Outline Color (Color): Color of point outline

#### **Chart Options - Title:**

- Enable Main Title (bool): Show/hide chart main title
- Main Title (string): Main title content
- Main Title Option (Chart Text Options): Main title text options
- Enable Sub Title (bool): Show/hide chart sub title
- Sub Title (string): Sub title content
- Sub Title Option (Chart Text Options): Sub title text options

#### **Chart Options - X Axis:**

- Axis Line Color (Color): Color of axis lines
- Axis Line Width (float): Width of axis lines
- Grid Line Color (Color): Color of grid lines
- Grid Line Width (float): Width of grid lines
- Tick Color (Color): Color of ticks
- Tick Size (Vector2): Width and length of ticks
- Auto Axis Line Position (bool): Auto adjust axis line position so it always indicates '0'
- Enable Title (bool): Show/hide x axis title
- Title (string): X axis title content
- Title Option (Chart Text Options): Title text options
- Enable Label (bool): Show/hide x axis labels
- Label Option (Chart Text Options): Label text options
- Auto Rotate Label (bool): Automatically rotate labels when labels are too long
- Skip Label (int): Skip labels to prevent overlapping. '-1' indicates auto skipping. '0' indicates that no label will be skipped.
- Max Labels (int): Maximum number of labels. '0' indicates unrestricted number. Only applicable when auto skipping is enabled (skipLabel = -1).

#### **Chart Options - Y Axis:**

- Axis Line Color (Color): Color of axis lines
- Axis Line Width (float): Width of axis lines
- Grid Line Color (Color): Color of grid lines
- Grid Line Width (float): Width of grid lines
- Tick Color (Color): Color of ticks
- Tick Size (Vector2): Width and length of ticks
- Enable Title (bool): Show/hide y axis title
- Title (string): Y axis title content
- Title Option (Chart Text Options): Title text options
- Enable Label (bool): Show/hide y axis labels
- Absolute Value (bool): Display absolute label values
- Label Format (string): Label format string, keywords will be replaced while other characters remain the same, useful for adding unit.
  - '{value}' will be replaced with label value.
- Label Option (Chart Text Options): Label text options
- Start From Zero (bool): Y axis value range always starts from zero. If disabled, the range will focus between the minimum value and maximum value of data
- Min Range Division (int): Min number of divisions for the y axis value range
- Fixed Range (bool): Manually control y axis range. If fixed range is enabled, 'Start From Zero' and 'Min Range Division' will be overwritten by fixed range options
- Fixed Min Range (float): Min value of fixed range
- Fixed Max Range (float): Max value of fixed range
- Fixed Range Division (int): Number of divisions

## **Chart Options - Tooltip:**

- Enable (bool): Enable/disable tooltip when mouse is hovering chart items
- Share (bool): Share tooltip for all series in current category or display tooltip for individual series
- Absolute Value (bool): Display absolute data values
- Header Format (string): Tooltip header format string, keywords will be replaced while other characters remain the same.
  '{category}' will be replace with current category.
- Point Format (string): Tooltip point format string, keywords will be replaced while other characters remain the same.
  - '{series.name}' will be replace with series name
  - '{data.value}' will be replace with data value
  - '{data.percentage}' will be replaced with data percentage

- Point Numeric Format (string): Tooltip point numeric format string, it is a C# standard numeric format string. Leave it empty for auto numeric format
- Text Option (Chart Text Options): Tooltip text options
- Background Color (Color): Color of tooltip background

#### **Chart Options - Legend:**

- Enable (bool): Show/hide chart legends
- Alignment (Text Anchor): Legend alignment position
- Item Layout (RectTransform.Axis): Horizontal or vertical layout
- Horizontal Rows (int): Number of rows for horizontal layout
- Text Option (Chart Text Options): Legend text options
- Icon Image (Sprite): Legend icon sprite image
- Background Color (Color): Color of legend background
- Highlight Color (Color): Color when legend is highlighted
- Dimmed Color (Color): Color when legend is turned off

#### **Chart Options - Label:**

- Enable (bool): Enable/disable label of chart data
- Absolute Value (bool): Display absolute data values
- Format (string): Label format string, keywords will be replaced while other characters remain the same.
  - '{series.name}' will be replace with series name
  - '{data.value}' will be replace with data value
  - '{data.percentage}' will be replaced with data percentage
- Numeric Format (string): Label numeric format string, it is a C# standard numeric format string. Leave it empty for auto numeric format
- Anchored Position (float): Label anchored position in the chart item, 0.0/0.5/1.0 indicates beginning/middle/end of the item
- Text Option (Chart Text Options): Label text options
- Offset (float): Label offset distance from the chart item, positive/negative value will move label away/toward the chart center
- Rotation (float): Label rotation
- Best Fit (bool)(only applied for pie chart): Adjust pie chart size to fit with labels

# Chart Text Options: Configuration for all chart text components

- Color (Color): Text color
- Font Size (int): Text font size

- Font (Font): Text font. If this is null, Options Plot Option -General Font will be used.
- Customized Text (Text): Text template. Chart will instantiate the text GameObject with all its attached components (e.g. shadow, outline), which allows more advanced text settings. This will overwrite all basic text options (Color, Font Size and Font).

**Data Display Format:** Data display format for chart components (legend, label)

- Name: Display series nameValue: Display data value
- Percentage: Display data percentage in current series
- Name Value: Display series name and data value
- Name\_Percentage: Display series name and data percentage in current series

Chart Data: Data to be displayed

- Unit (string): Unit of data
- Series (list of Series): Chart data
- Categories (list of string): X axis categories

**Series:** Each series represents one sequence of data to be displayed in the chart

- Name (string): Name of the series
- Show (bool): Show/hide this series
- Data (list of Data): Data of this series.

-Note: For pie chart, only the first data of each series is used

Data: Individual data in a series

- Show (bool): Show/hide this data
- Value (float): Value of this data