Build a web page containing a single canvas element and a script that draws a star wherever the canvas is clicked with the mouse.

Objectives

- Create a canvas element and 2D drawing context.
- Create and draw a canvas path made up of straight lines.
- Handle click events on a canvas.

Requirements

- Your script must implement a function that draws a star with the following signature,

  ```
  function drawStar(cx, cy, radius, npoints, ctx)
  ```

  where:
  - `(cx, cy)` is the center point of the star to be drawn
  - `radius` is the radius of the enclosing circle
  - `npoints` is the number of points in the star to be drawn
  - `ctx` is the 2D rendering context on which to draw the star
- Handle the click event of the `<canvas>` element. When the canvas is clicked, invoke the `drawStar(…)` function with the event mouse coordinates passed as `(cx, cy)`. Pass appropriate values for `radius` and `npoints`.
- Your entire script must be enclosed in an IIFE.
- You MUST enter header comments in your JavaScript code including (1) your name, (3) description and or purpose of the assignment.
- You MUST comment your code, explaining what you did in each section.
- Submit JavaScript and/or HTML files on Canvas under the appropriate assignment.

Hints

- Use to the `getMousePos(…)` function in the lecture slides to get a canvas mouse event position.
- Refer to the lecture slides for one algorithm for drawing a star with a specified number of points and radius.
- Use the following formulas to convert cylindrical coordinates (r, Θ) to Cartesian coordinates (x, y):

  $x = r \cos(\Theta) + cx, \quad y = r \sin(\Theta) + cy$