GSOC SU 2 Assignment - 4

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In this assignment, spatially varying wall temperature over a flat plate is analyzed. The temperature varies linearly by the equation:

$$\text{WallTemp} = m \cdot x + c \tag{1}$$

We have performed the simulation with the Spalart-Allmaras (SA) turbulence model. For varying the wall temperature linearly using the Python wrapper, we need to add the below lines in the cfg file:

```
MARKER_PYTHON_CUSTOM = (wall)
```

This line refers to a custom boundary condition that will be defined in a Python script.

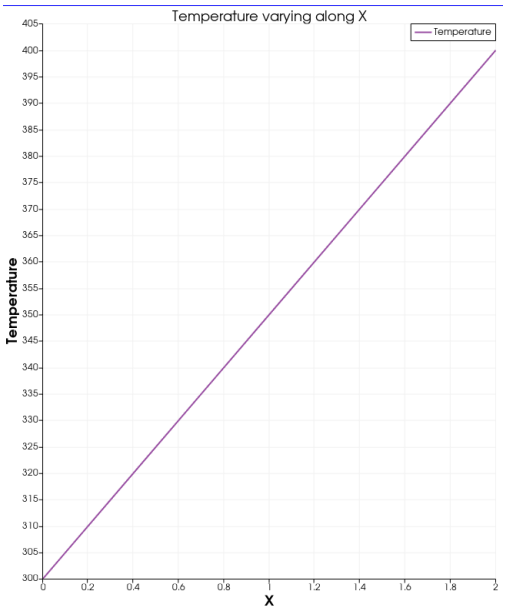

Figure 1: Varying Temperature along X

For equation 1 The m given in the Python code is 50 and C is 300. So we can see the constant increase in temperature along the X-axis.

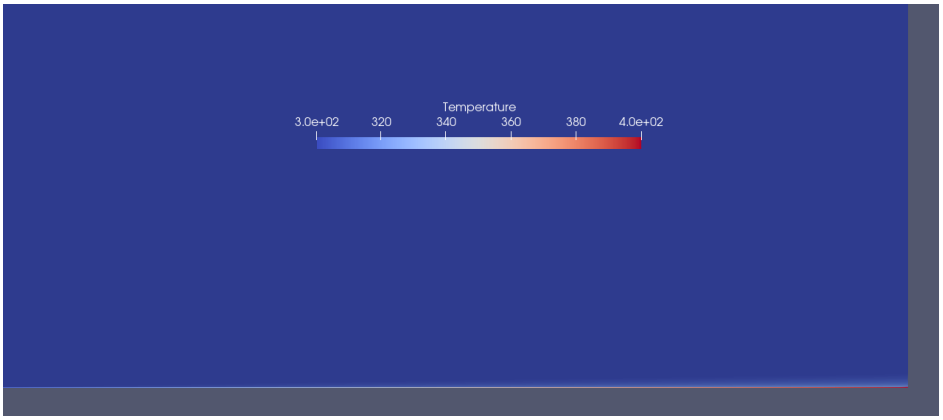

Figure 2: Temperature Contour

From the above contour we can see the increase in temperature along the length of the plate.