Different discretization schemes in OpenFOAM

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Methodology

- **Modified the Header File:** Updating its content to reflect the following details for OpenFOAM. The updated header file introduces version information (v2212) and identifies OpenFOAM as the open-source CFD toolbox, including a reference to its official website (www.openfoam.com).

```
/*--------------------------------*- C++ -*----------------------------------*\
| =========                 |                                                 |
| \\      / F ield          | OpenFOAM: The Open Source CFD Toolbox           |
|  \\    /  O peration       | Version:  v2212                                |
|   \\  /   A nd            | Website:  www.openfoam.com                      |
|    \\/    M anipulation   |                                                 |
\*---------------------------------------------------------------------------*/
```

Header File

- **Reran Simulation :** Executed simulation rerun adhering to the procedural instructions outlined in the report/readme file.

- **Post-processed Simulation Results :** Performed post-processing operations to acquire results that precisely correspond to the contours and plots outlined in the report.

Conclusions

- A large number of plots and images were available in the report section. To keep the report concise, and account for time constraints, only few graphs were plotted considering the observable differences in the plot.
- Such (differences) are not visible in the contours except for a few.
- Using pyFoam utlity, Residuals vs Time (s) is also attached in the figure.
- For comparison purposes, the plot available in the report of the case has been bordered with Red Color of thickness 1. It also has Figure title attached to it.
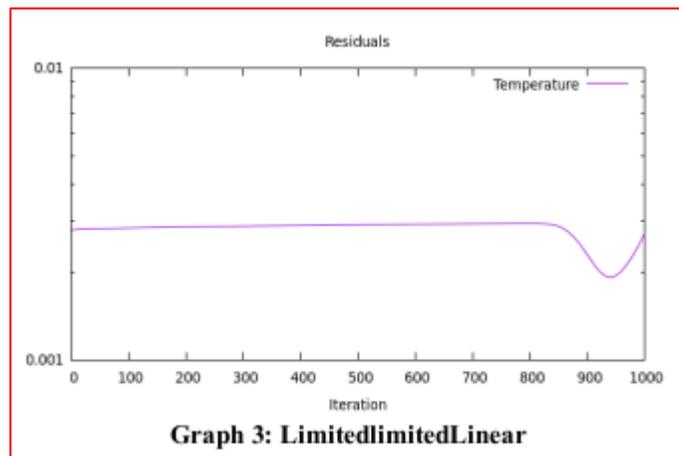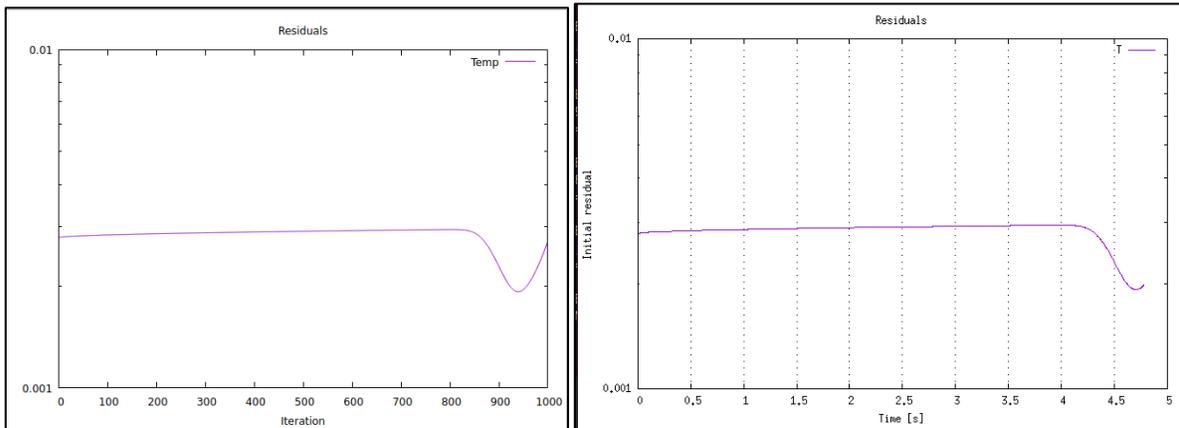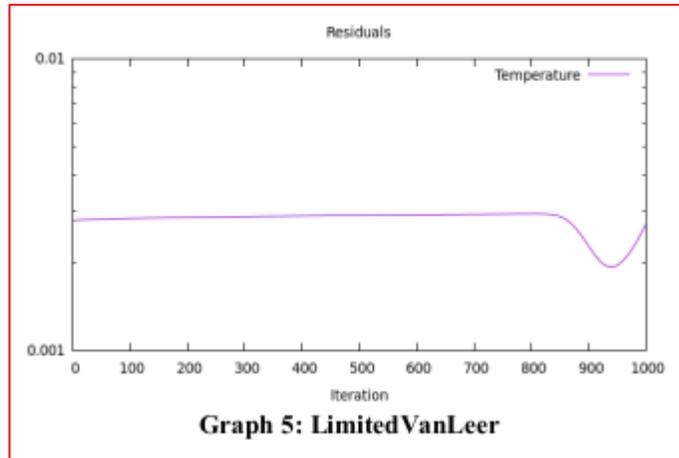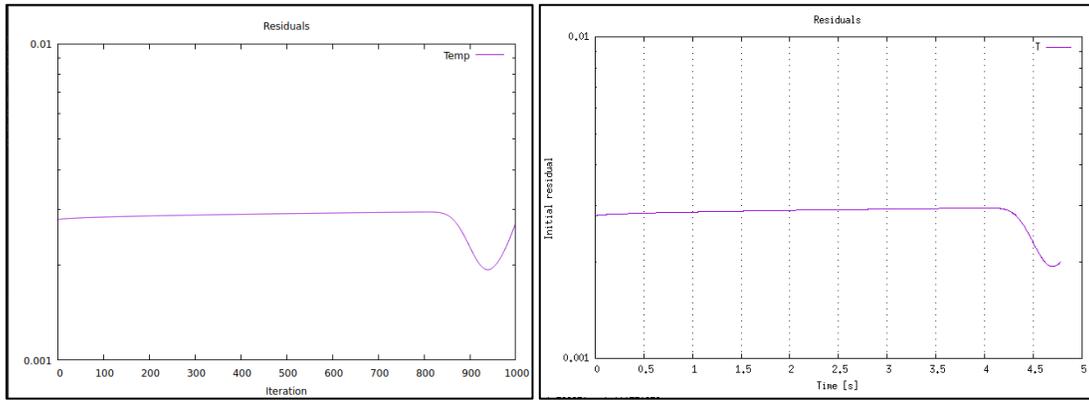
1. Cubic

Graph 1: Cubic

2. LimitedCubic
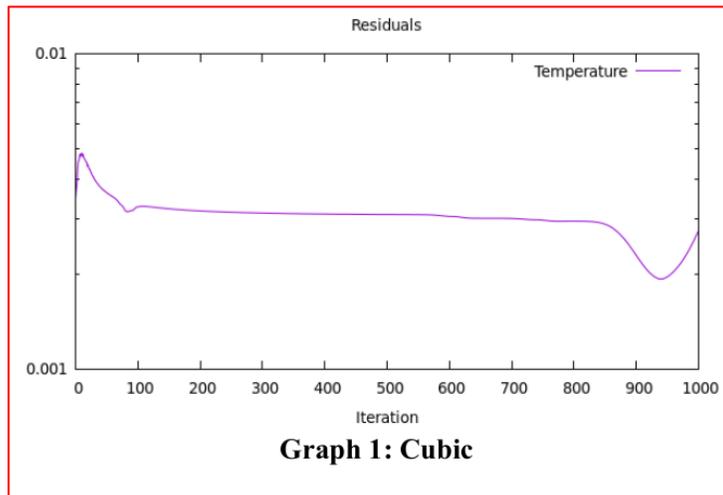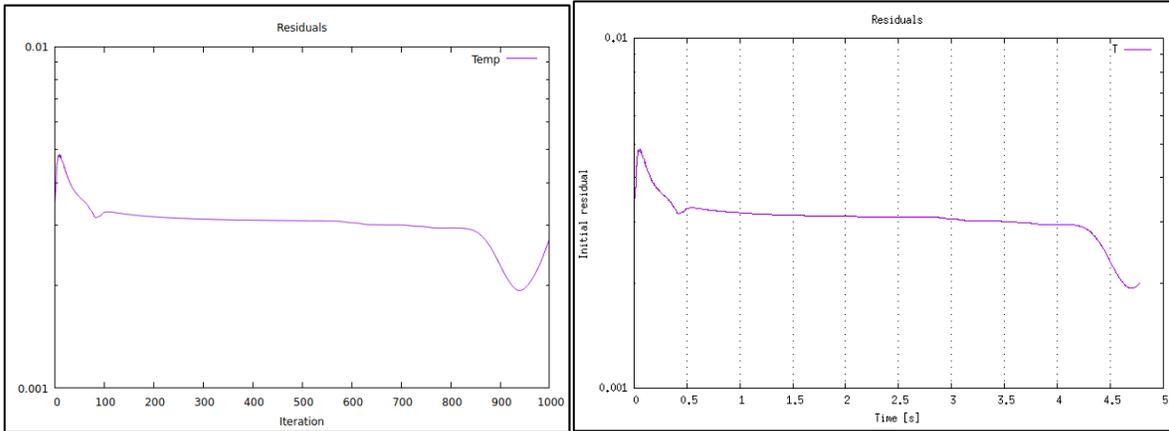
Graph 2: Limitedcubic

3. LimitedlinearLinear
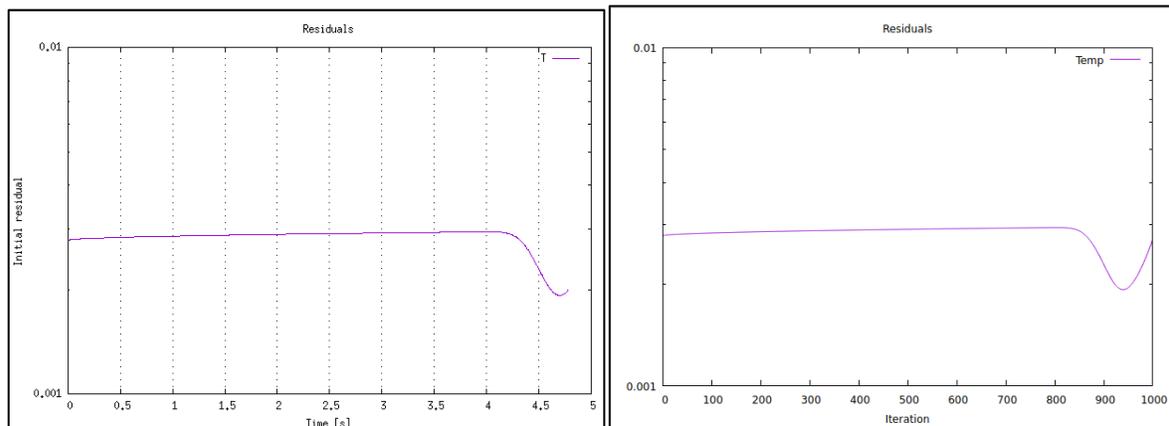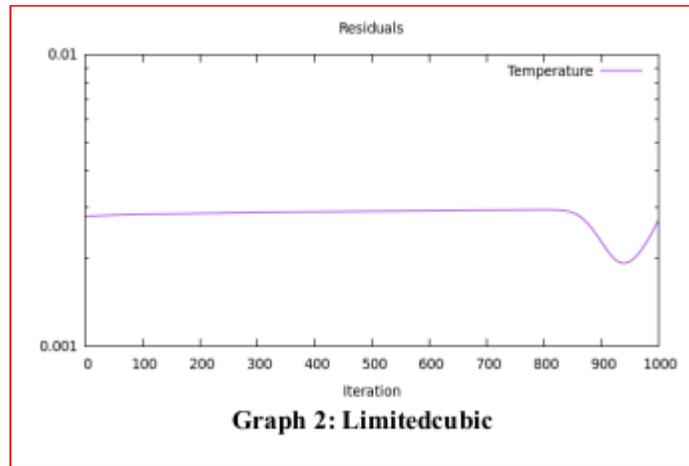
Graph 3: LimitedlimitedLinear

4. LimitedVanLeer

Graph 5: LimitedVanLeer

5. Linear

Graph 6: Linear