PDC PROJECT : “**PARALLEL PROCESSING OF LARGE NUMBER OF IMAGES”**

GROUP NO : **30**

**GROUP MEMBERS**

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**SELECTION OF CODE:**

Repository Link:

Updated Code Repository Link:

* The first link is the ‘code’ we selected from github.It has different file for each feature including blurring, negating,sharpening,gray-scaling.
* we introduce **makefile** to make process building simpler and modular.

**How do we make code complex?**

* We add more **functionalities i:e; filters** to make the code complex.
* **#pragma omp parallel for:** it introduces complexity in a way that each thread processes the image independently.
* **Schedule (static):** it is used as all tasks significantly take uniform time to complete so need to schedule dynamically.
* We make the code complex by integrating all features in one program in order to increase pragmas.For this, **#pragma task** will be used for “task parallelism” for each filter.
* Additionally, we use a maximumnumber of **clauses** like ‘collapse(2)’ used for nested loops to be collapsed in a single loop, distributing all pixel operations across threads **improving load balance** and **performance**.
* We faced challenge in managing shared resources as we can use here firstprivate clause for **ImageData** instance i:e; img, but “**firstprivate**” make **shallow copy** of instance but “img” contain rowpointers so shallow copy doesn’t work here.That’s why we use **deep copy** for each filter.