How to Run

To generate data just run Run.sh in Data_Generation folder.

Configuration

Configuration is needed for setting platform id for cpu and gpu separately as it varies for different heterogeneous systems.

1.Matrix_Mul :

Open Matrix_Mul folder.

- ***Setting platforms :*** *In CPU/GPU folder set platform id according to the system.*

Open ▾ matrixmul_host.cpp
~/Desktop/Data_Generation/Matrix_Mul/CPU

```
// Connect to a compute device
int gpu = 0;
err = clGetDeviceIDs(platform_ids[0], gpu ? CL_DEVICE_TYPE_GPU : CL_DEVICE_TYPE_CPU, 1, &device_id, NULL);
if (err != CL_SUCCESS)
{
    printf("Error: Failed to create a device group!\n");
    return EXIT_FAILURE;
}
```

- ***Setting no of samples :*** *In Run.sh set loop size according to sample size for cpu and gpu.*

```
cd CPU

a=0

while [ $a -lt 2 ]
```

```
cd GPU

#a=0

while [ $a -lt 2 ]
```

In Matrix_Sizes.cpp set loop condition with sample size (100 in fig below)

```
/************************** Random Matrix Sizes Generation ************************/

set<int> Matrix_Sizes;

/*Matrix_Sizes.insert(1024);*/

for (int i = 7000; i <= 20000; i+=500) /* Multiples of 500 within 1500-20000 */
{
    Matrix_Sizes.insert(i);
}

while (Matrix_Sizes.size()<100) /* Random No within 1024-19999 */
{
    int temp = (rand()%18975) + 7000;
    Matrix_Sizes.insert(temp);
}
```