Matrix multiplication Tiling

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1.   Speedup Results

8 x 8 Tiles

```
Matrix size: nx 2000 ny 2000
multMatrixOnHost Average elapsed 50413.988281 ms


GPU Tile size: nx 8 ny 8
tilledMatrixMult <<<(250,250), (8,8)>>> average elapsed 153.104706 ms
```

- **Speedup CPU vs GPU 8x8 Tiling: 50,592 / 153.1 = <u>330.45</u>**
- **Speedup GPU vs GPU 8x8 Tiling: 360 / 153.1 = <u>2.35</u>**

16 X 16 Tiles

```
Matrix size: nx 2000 ny 2000
multMatrixOnHost Average elapsed 50637.183594 ms


GPU Tile size: nx 16 ny 16
tilledMatrixMult <<<(125,125), (16,16)>>> average elapsed 85.152451 ms
```

- **Speedup CPU vs GPU 16x16 Tiling: 50,592 / 85.15 = <u>594.15</u>**
- **Speedup GPU vs GPU 16x16 Tiling: 360 / 85.15 = <u>4.22</u>**

32 x 32 Tiles

```
Matrix size: nx 2000 ny 2000
multMatrixOnHost Average elapsed 50724.589844 ms


GPU Tile size: nx 32 ny 32
tilledMatrixMult <<<(63,63), (32,32)>>> average elapsed 74.261337 ms
```

- **Speedup CPU vs GPU 32x32 Tiling: 50,592 / 74.26 = <u>681.28</u>**
- **Speedup GPU vs GPU 32x32 Tiling: 360 / 74.26 = <u>4.84</u>**