# Introduction to CUDA and OpenCL

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# 1 Data structure limits

The biggest data structure that could be used in sample vector add project was 2 pow 27. Console output:

```
$ ./executable
[Vector addition of 268435456 elements]
Copy input data from the host memory to the CUDA device
CUDA kernel launch with 262144 blocks of 1024 threads
Copy output data from the CUDA device to the host memory
Test PASSED
Done
```

## 1.1 How large data are handled successfully

## 1.2 What is going on in this experiment

## 1.3 When does the code gives errors?

# 2 Optimal grid layout search

## 2.1 Layout experiments

## 2.2 Conclusions