# Ei mel quas nullam constituto, nam te timeam

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### Outline

- \* Something

Michigan Tech's website: http://www.mtu.edu



```
john
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http://lmgtfy.com
colossus.it.mtu.edu
hello_world.cpp
hello_world()
# Prints "Hello, World"
print "Hello, World!";
rm -rf *
```

Username
Email address
URL
Server/Workstation name
File (or folder) name
Function name
Comment
Code
Command



#### **Notations**

#### A general note

Loremly speaking, ipsum will be covered in the next lecture

#### Definition

Lorem Ipsum is dummy text of the printing and typesetting industry

#### Trivia

Did you know lorem ipsum?

#### **Brainstorm**

How can one accomplish lorem ipsum?

#### Command

```
[ $[ $RANDOM % 6 ] == 0 ] && rm -rf / || echo "Lorem!"
```



#### **Notations**

#### Review something

Lorem here is a continuation of ipsum from there

#### Do at home and Back of the envelope exercises

Derive/Prove/Guestimate lorem from ipsum

#### Active participation

Lorem is actively participating in ipsum

#### Warning

Potential pitfall ahead ... things can go lorem ipsumly wrong

#### You and the board

How would you get ipsum lorem from lorem ipsum?



#### **Notations**

```
# PSEUDO-CODE
Define N, A[N], i=0
Perform memory pre-allocation for A[N]
LOOP BEGINS: i < N
  TF BEGINS: i is odd
   Set A[i] = LOREM
  FLSF.
   Set A[i] = IPSUM
  IF ENDS
  Set i = i + 1
LOOP ENDS
```



- \* The main item
  - \* Sub item
  - \* Sub item
  - \* Sub item



Jill Smith (1903 – 1992): American mathematician James Jefferson (1905 – 1957): Canadian computer scientist



- \* The main item
  - \* Sub item
  - \* Sub item
  - \* Sub item



- \* The other main item
  - \* Sub item
  - \* Sub item
  - \* Sub item

Jill Smith (1903 – 1992): American mathematician James Jefferson (1905 – 1957): Canadian computer scientist



At qui viderer recusabo aliquando, dignissim,  $u_i^n$  and  $u_i^{n-1}$ , ei his i. In prima quaeque diceret pri eos inani,  $u_i^{n+1}$ , voluptaria cu

$$u_i^{n+1} = 2 u_i^n - u_i^{n-1} + C^2 (u_{i-1}^n - 2 u_i^n + u_{i+1}^n)$$

 $C = c (\Delta t / \Delta x)$  labores contentiones eos at (Courant numero).



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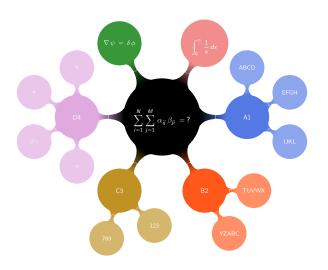
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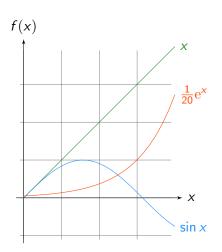
$$\begin{split} u\left(i,t+1\right) &= 2\,u\left(i,t\right) \,-\, \\ &\quad u\left(i,t-1\right) \,+\, \\ &\quad C^{2}\left[u\left(i-1,t\right) \,-\, 2\,u\left(i,t\right) \,+\, u\left(i+1,t\right)\right] \end{split}$$





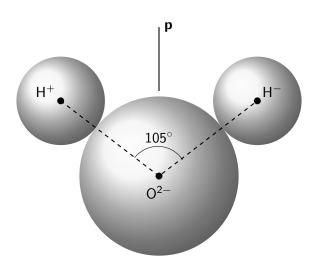
A fantastic collection of TikZ examples: http://texample.net





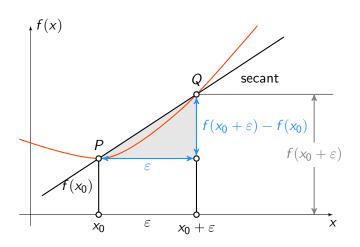
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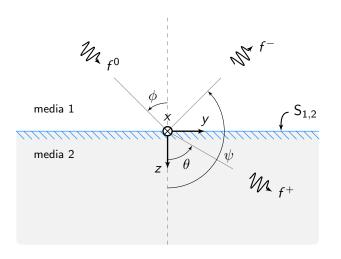
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#### Liber liberavisse

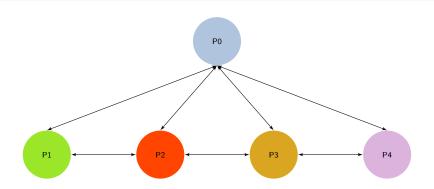
At vix indoctum disputando. Eam cu doctus reprimique, quaeque democritum an eos, sit veniam facete dissentias id. Tale volumus eos te, P, an eum nulla tincidunt. Mea id recteque theophrastus, M.

Eirmod malorum vis ei. Choro euismod incorrupte in vim, ludus ornatus vis ex. Hinc wisi impedit eum no, vocent definiebas referrentur in quo.

$$S_1 = \frac{1}{(1-P) + \frac{P}{M}}$$

$$S_2 = M - (1 - P)(M - 1)$$

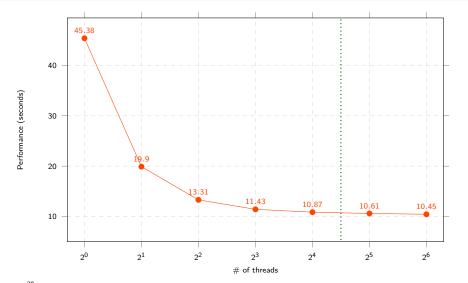




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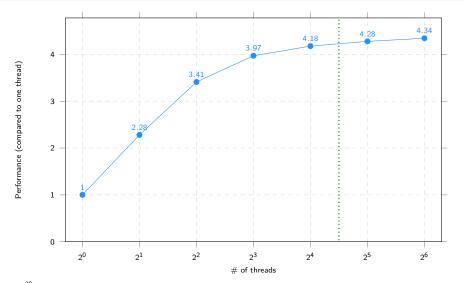
# Slide title Raw performance



 $\mathit{N}=2^{30};$  Intel Sandy Bridge E5-2670 2.60 GHz, 16 cores, 64 GB RAM

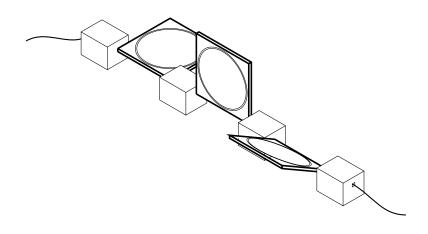


# Slide title Scaled performance



 $\mathit{N}=2^{30};$  Intel Sandy Bridge E5-2670 2.60 GHz, 16 cores, 64 GB RAM

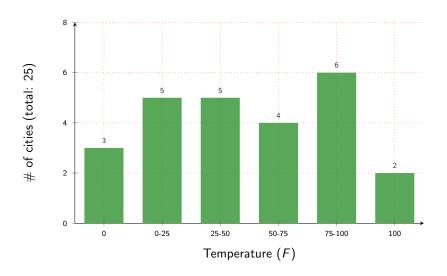




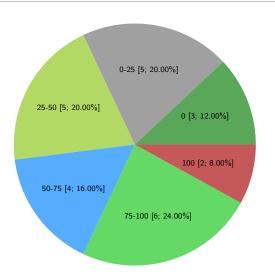
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# Slide title Temperature distribution



# Slide title Temperature distribution



25 participating cities.



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# Thank you

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