



EIT ICT Labs
**DOCTORAL TRAINING
CENTRE BUDAPEST**

eit Knowledge &
Innovation
Community
EIT ICT Labs

Programming Programs

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Domain specific languages

Q = EACCQ ITM OQ = EE = ZE MΓ = FOM = AF Z XM
EF YFG = C-EITE = CTE = CC YGCC = Γ-ODΓ = ZAM
EE = YZAI-M MΓ = EIC = CEEIIEIT MΓF = ZE = E =
ZDDZΓ = MZ MΓ = C-EITE MΓF = ZE EE = ΓE = CEEIΓ = E
M = ZF YΓ-EI E EPTXΓ YQ OQ 'F-GE-CQ' Y = Z = E
MTO-M = ZFIE-CF =

This is what your customer understands from the actual code

EUMPOSM MZ M-FZE-MCT E = ZFM Z = MZQ Z = MΓ =
C-EITE = MAM E-ΓE = Z = MΓ DΓEYΓ MΓEUM M-EM = F
= ΓCZ = ITM EPTZM-AMΓ = E XMAEF YFG = Q YΓ = E =
MZHFFΓ = ZAEUMQ =

XAFΓ = CC = ITD YAE-EI M = ΓFΓ = MAM MZ = IT Γ = E
M = EDDGE = EE = ZI MΓQ EUMPOSM MZ = CC = E MΓ Y
C EE = YAM IT ECC = ETI = ZI M ΓE = AD = C-EITE =
EE = Γ-ΓFAM-ZE E = ACC-Γ = EE = ETM Γ-EZM ΓEPOΓ =
IFM = E M = YZZ = ΓYΓEM ΓFΓ' = E = IT MΓCC = ZI
O MΓ = C-EITE CEEIIEIT MΓF = ZE =

Y-ZAI = M' = E = C-EITE = MΓ =
ZAMΓ = EMZ = EIC =

shouldn't matter, should it?

Domain specific languages

ϕ = ε α λ λ ρ ι τ ω ρ ρ = ε ε = τ ε μ γ = τ ω = α γ τ ε χ μ
 ε τ γ τ = ε ε ι τ ε = ε τ ε = ε ε γ τ ε ε = ε γ ε τ ε τ ω μ
 ε ε = γ τ α λ μ μ γ = ε ι ε = ε ε ε ι λ ε ι γ μ γ τ ε = ε =
 τ ω τ ε = μ τ μ γ = ε ε ι τ ε μ γ τ ε ε ε = ε ε ε ε ι γ = ε
 μ = τ τ γ τ ε ι ε ε ε τ γ γ τ ρ ρ ρ = ε γ ε ε ε ρ τ = τ = ε
 μ τ ω μ = ε τ μ α κ τ ε =

γ γ = μ τ ρ ε = ε ε ι ε = ε μ ε τ ε μ = ε μ γ τ α μ ε ε =
 ε μ γ τ ω μ μ τ μ = τ ε μ γ ε ε = ε τ ω τ = μ τ ρ τ = μ γ =
 ε ε ι τ ε = τ α μ ε γ ε = τ μ γ ε μ γ μ γ ε μ γ μ ε μ = τ
 = γ ε ε = ι γ ε ε τ ε μ ε μ γ = ε χ μ ε τ γ τ = ϕ γ γ = ε =
 μ τ ω γ τ = τ ε μ τ ε

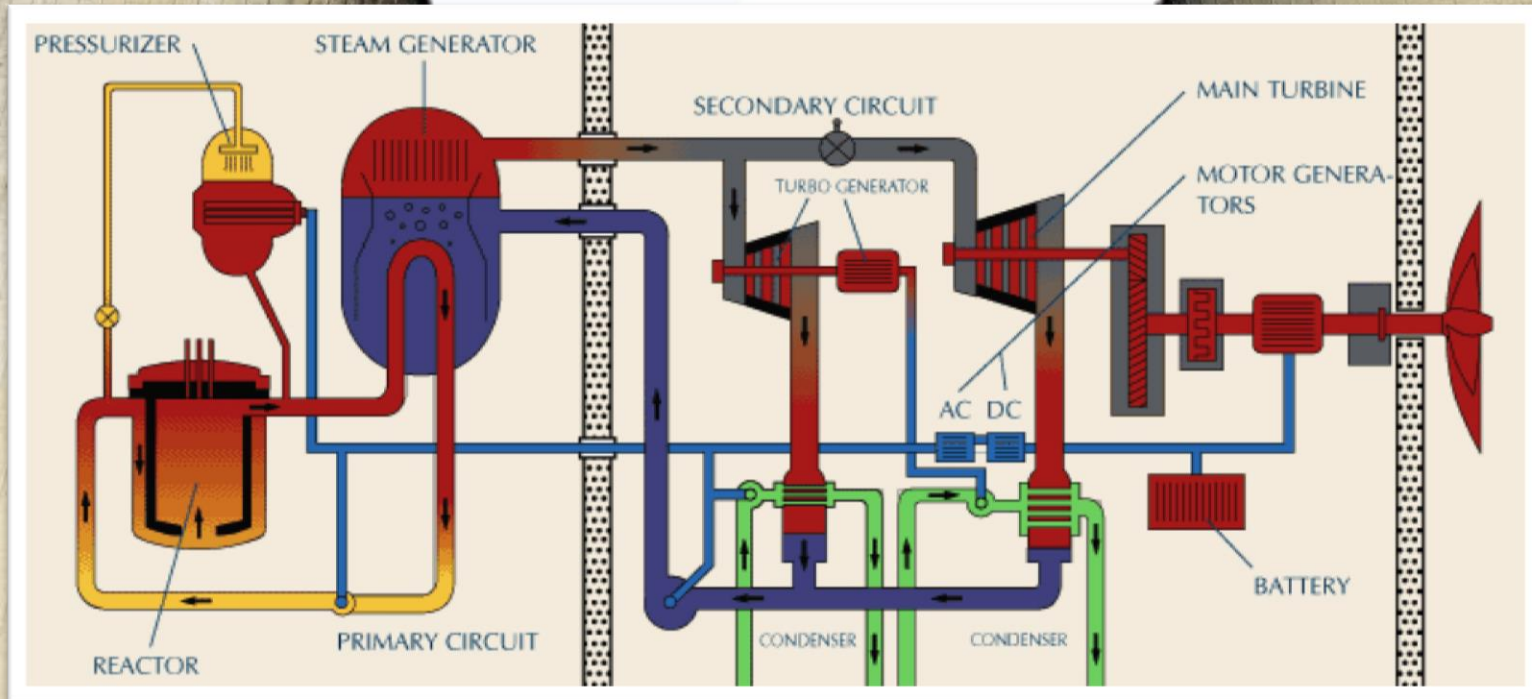
χ λ τ = ε ε μ γ τ ε γ α ρ ε ι μ = γ τ ε = τ α μ μ τ ε τ ε
 μ = ε ε τ ε = ε ε = τ μ γ ρ ε μ γ τ ω μ μ τ = ε ε μ γ γ
 ε ε = γ α μ τ ε ε ε = ε τ = τ ε μ τ ε = ε ε ε ε ι τ ε =
 ε ε = γ γ ε μ τ ε ε ε ε ε ε γ = ε ε ε μ γ τ ε τ ε τ ε γ ε
 ε μ = ε μ = γ τ ε = γ μ γ ε μ γ τ ε = ε ε τ μ γ ε ε = τ
 ρ μ γ = ε ε ι τ ε ε ε ε ι λ ε ι γ μ γ τ ε =

actually, it should

= ε ε ι τ ε = μ γ = ε ε ι τ ε = μ γ ε ε ε μ γ
 ε =

Domain specific languages

let's create programming languages



understood by computer and customer

Research and education

- Main topic: Domain Specific Languages

supported by basic research in

- Software transformations
 - Automatically improve software quality
- Formal methods
 - How to **know** that software what software **exactly** does



Business applications

- Safety critical systems
 - Communication with non-programmer engineers
- Cyber-physical systems
 - Physically distributed systems of diverse hardware
- Cloud applications
 - Automatically parallelizing and distributing software



Connections to EIT

eit Knowledge & Innovation Community
EIT ICT Labs

- Project member of EIT carrier project
 - Cyber-Physical Systems
- Business training
 - Plan: commercializing automatic parallelization of HPC
 - Mentoring by
 - Professional coaches
 - Aalto & ELTE teachers



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