

# Dešifраторiai, magistralės, atmintis

Saulius Gražulis

Vilnius, 2020

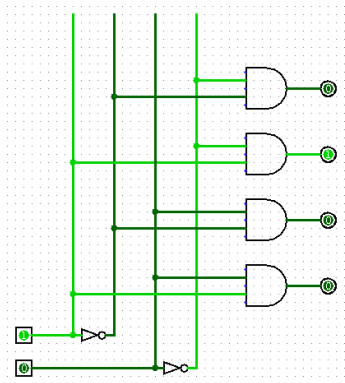
Vilniaus universitetas, Matematikos ir informatikos fakultetas  
Informatikos institutas



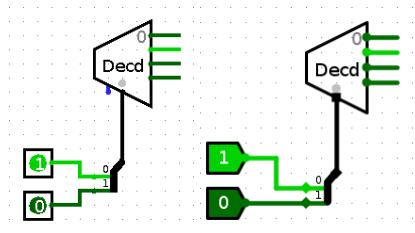
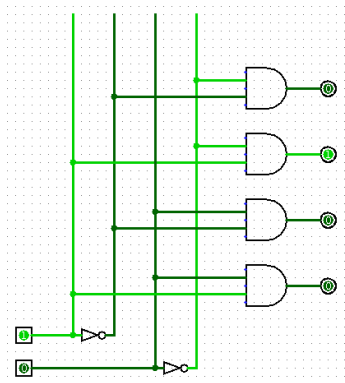
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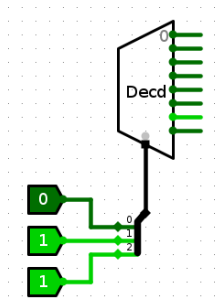
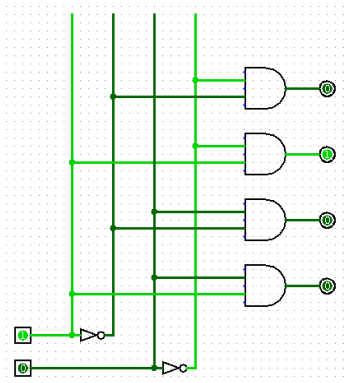
# Dekoderiai



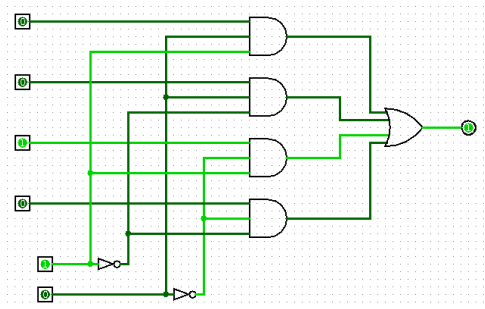
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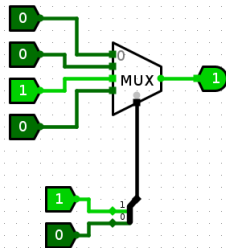
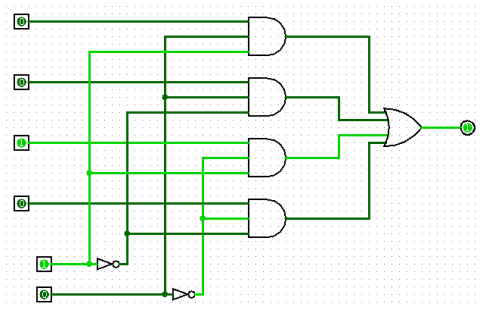
# Dekoderiai



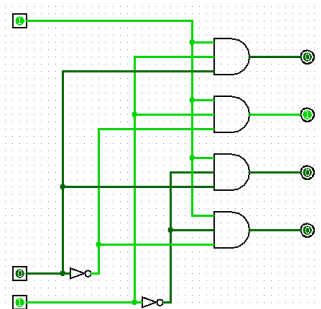
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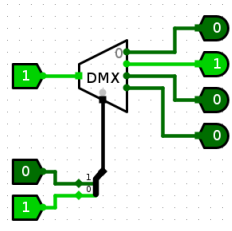
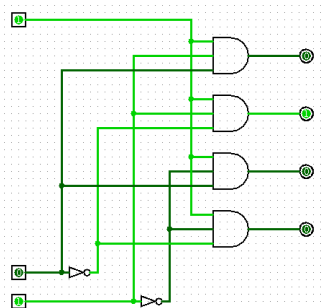
# Multiplexeriai



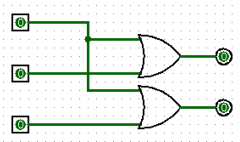
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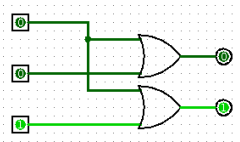


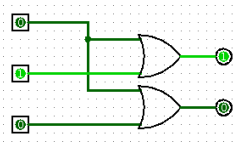
# Demultiplexeriai

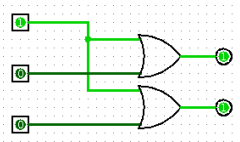


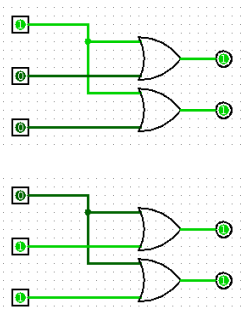




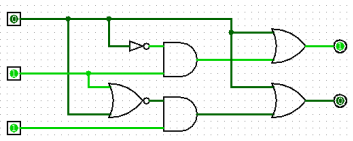
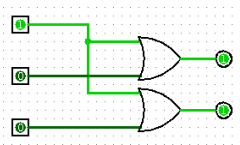




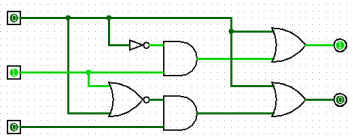
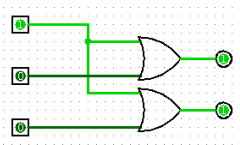




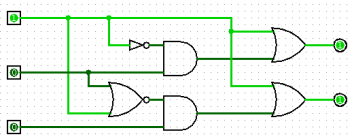
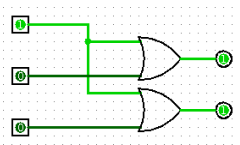
# Prioritetinis šifrotorius



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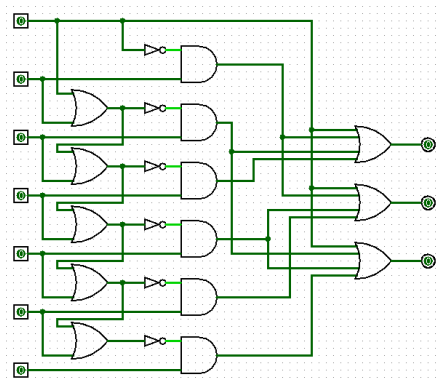


# Prioritetinis šifrotorius

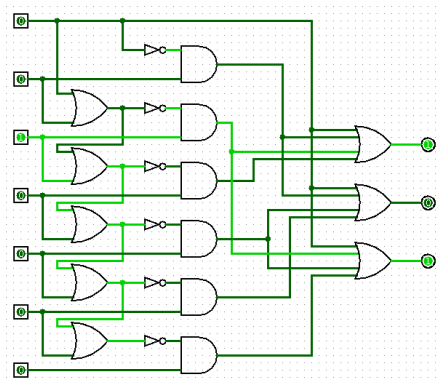




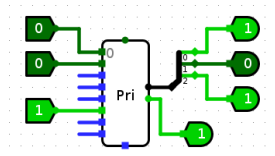
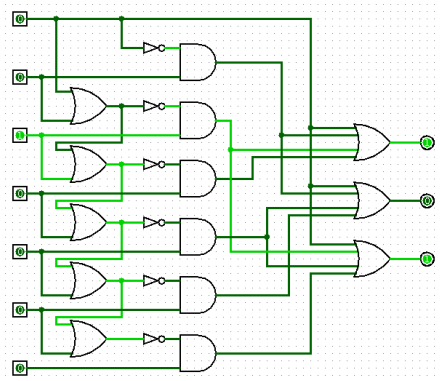
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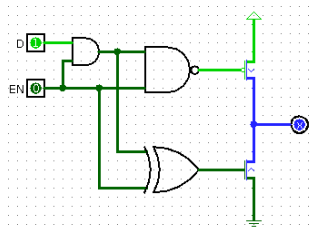
# Prioritetinis šifраторius



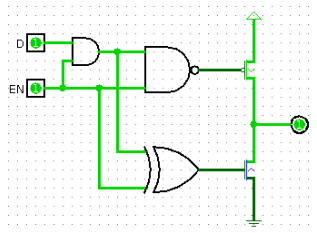
# Prioritetinis šifраторius



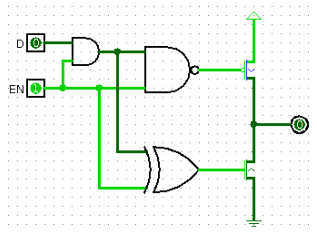
# Trijų būsenų išėjimas



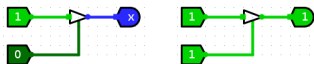
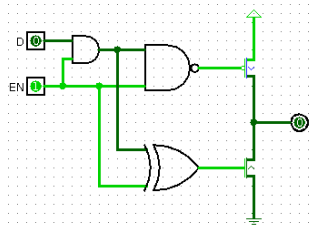
# Trijų būsenų išėjimas



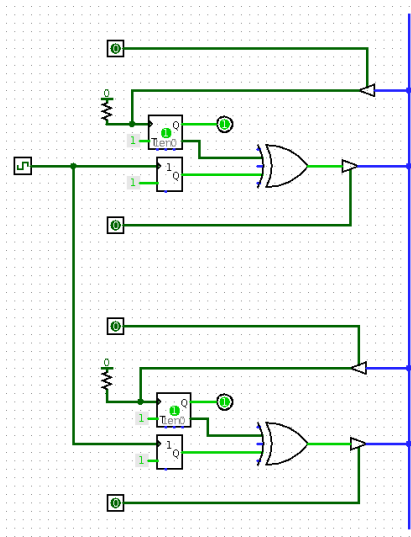
# Trijų būsenų išėjimas



# Trijų būsenų išėjimas

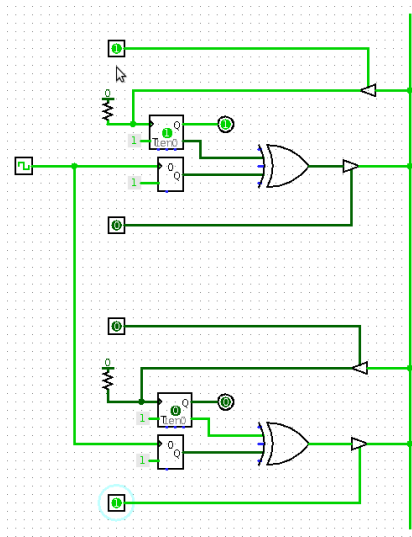


# Trijų būsenų išėjimas

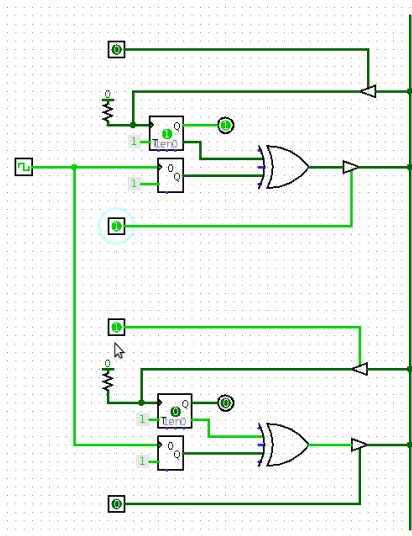




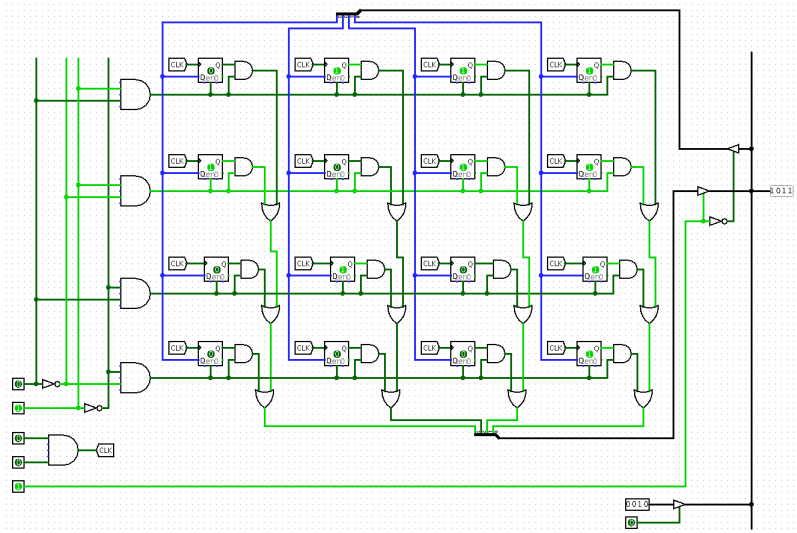
# Trijų būsenų išėjimas



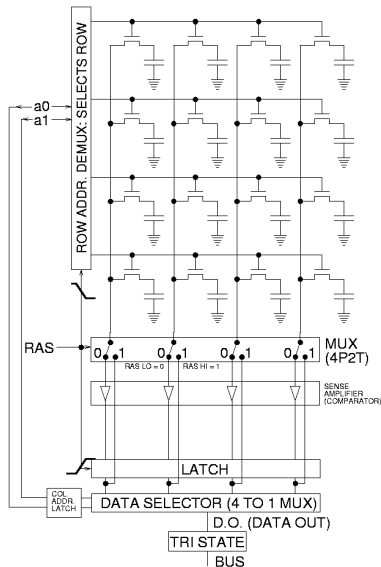
# Trijų būsenų išėjimas



# Statinė atmintis



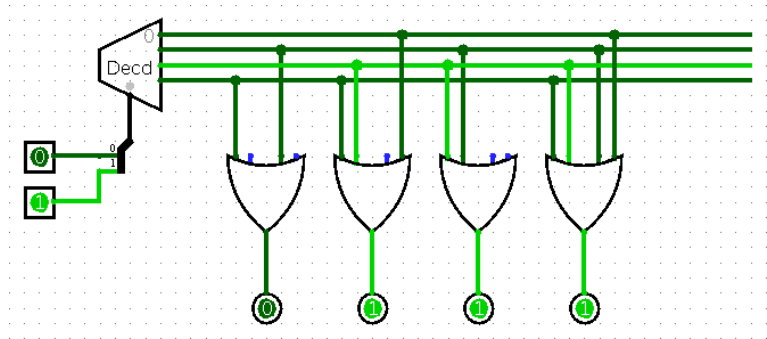
# Dinaminė atmintis



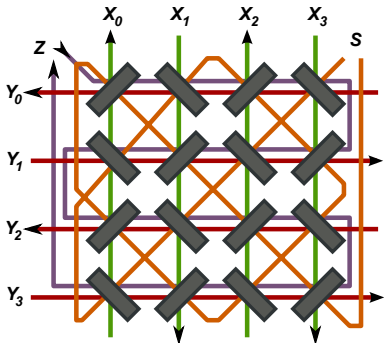
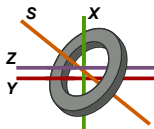
- Dydžiui sumažinti naudojami kondensatoriai vietoj trigerių;
- Maži kondensatoriai greitai išsikrauna!
- ⇒ atmintį reikia „atnaujinti“ (t.y. aktyvuoti kiekvieną jos eilutę) bent kartą per 64ms.

Glogger at [English Wikipedia](#)  
CC BY-SA

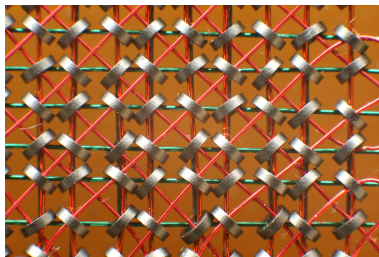
# Pastovioji atmintis (ROM)



# Feritinė atmintis



Šerdžių piešiniai: : By  
Tetromino - Own work, CC BY 3.0



Konstantin Lanzet / CC BY-SA



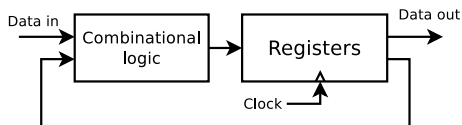
Wikipedia: [Skylab](#). Image by NASA, public domain.

*On March 11, the ATMDC powered up for 5 minutes to obtain telemetry confirmation that it was still functioning. The software resumed the program cycle where it had left off 4 years and 30 days earlier.*

<https://history.nasa.gov/computers/Ch3-5.html>

# Baigtiniai automatai: Mūro (Moore) ir Mylio (Mealy) mašinos

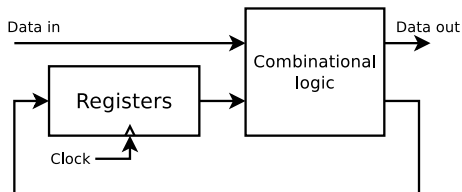
Mūro (E. F. Moore) automatas:





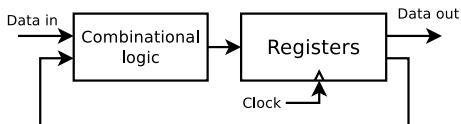
# Baigtiniai automatai: Mūro (Moore) ir Mylio (Mealy) mašinos

Mylio (G. H. Mealy) automatas:

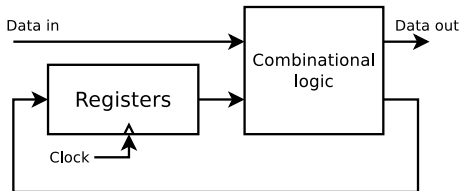


# Baigtiniai automatai: Mūro (Moore) ir Mylio (Mealy) mašinos

Mūro (E. F. Moore) automatas:

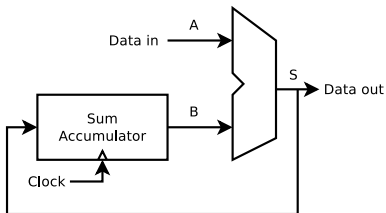


Mylio (G. H. Mealy) automatas:



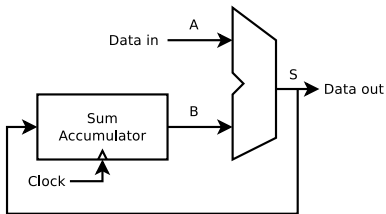
# Sumatorius (integratorius): abstrakti schema

Integratorius:

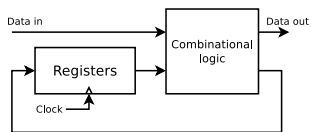


# Sumatorius (integratorius): abstrakti schema

Integratorius:

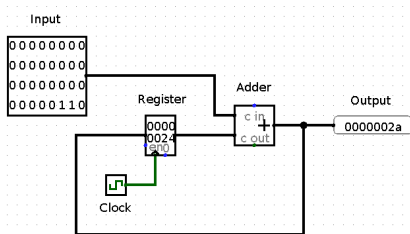
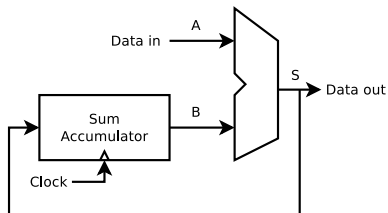


Mylio (Mealy) automatas:

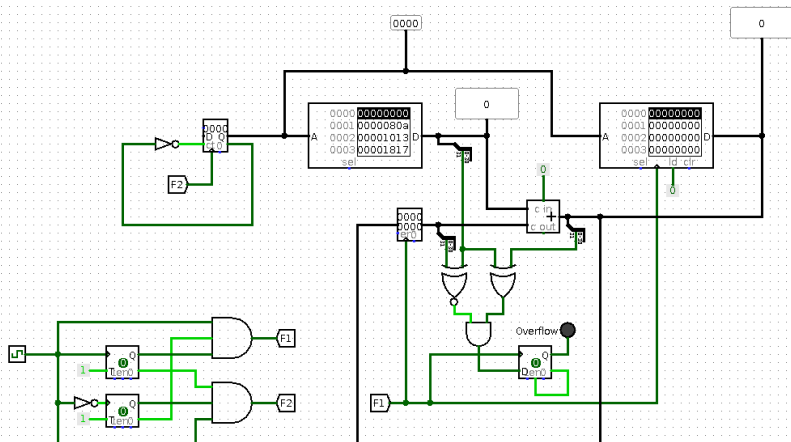


# Sumatorius (integratorius): abstrakti schema

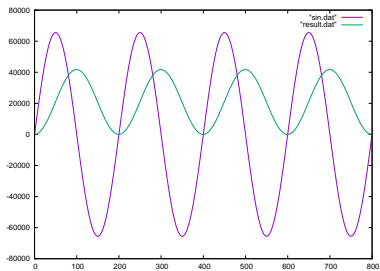
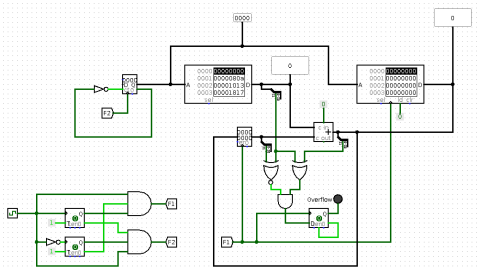
## Integratorius:



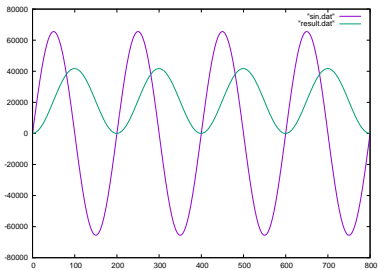
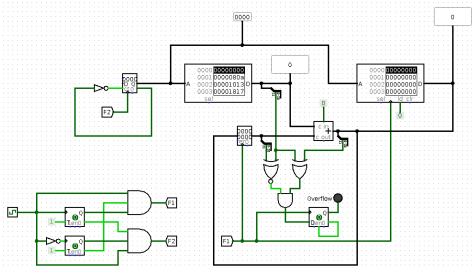
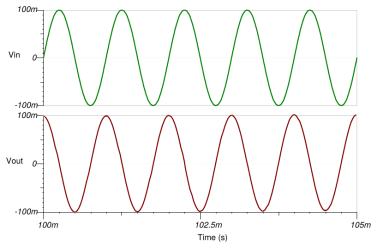
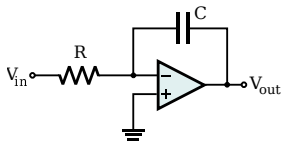
# Pavyzdys: integratorius



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