Ponavljanje za 2. kolokvij

(1) Parsiranje od vrha prema dnu

P:
S -> AabB
A -> aaA | Bbb
B -> AabaB | b

Niz: bbbabbbbabab

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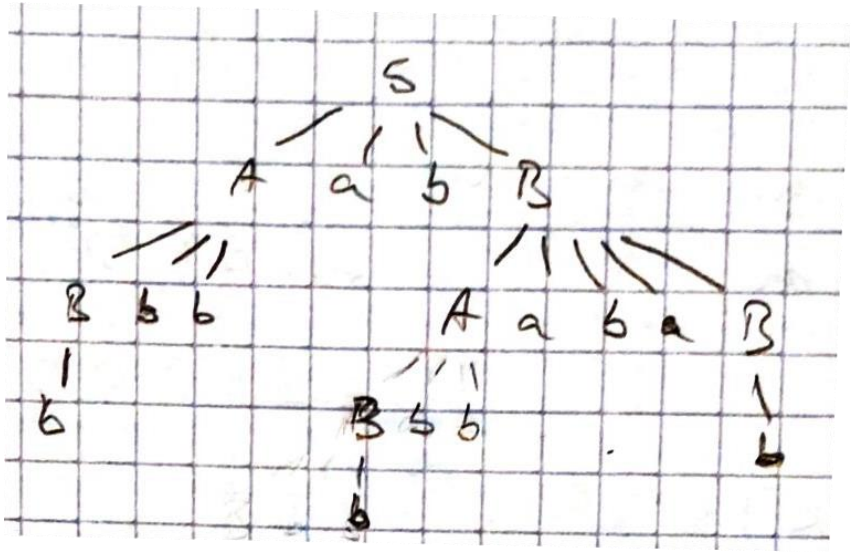

(2) Parsiranje od dna prema vrhu

P:
S -> AabB
A -> aaA | Bbb
B -> AabaB | b

Niz: bbbabbbbabab

(2) Parsiranje od dna prema vrhu

P:

S -> AabB

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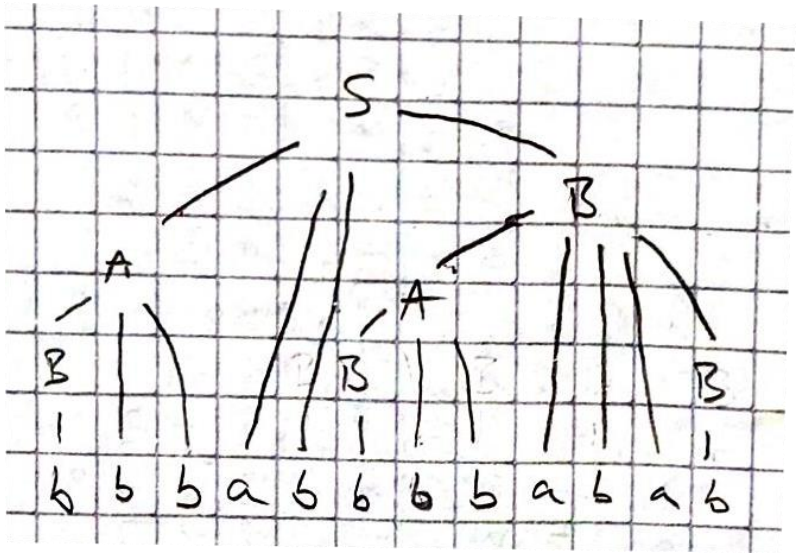
B -> AabaB | b

Niz: bbbabbbbabab



(3) LR parser

P:

1) S -> a

Ulaz: ab

	Akcija			Novo stanje
Stanje	a	b	⊥	S
0	S1			2
1		R1		
2		S3		
3			✓	

(3) LR parser

P:

1) S -> a

Ulaz: ab

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Stanje	a	b	⊥	S
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Stog	Ulaz	Akcija

(3) LR parser

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Stanje	a	b	⊥	S
0	S1			2
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Stog	Ulaz	Akcija
0	ab⊥	S1

(3) LR parser

P:

1) S -> a

Ulaz: ab

	Akcija			Novo stanje
Stanje	a	b	⊥	S
0	S1			2
1		R1		
2		S3		
3			✓	

Stog	Ulaz	Akcija
0	ab⊥	S1
0a1	b⊥	R1
0S2	b⊥	S3
0S2b3	⊥	prihvati

(4) Nedeterministički PA

PA M = ($\{q_1, q_2\}$, {1, 0}, {A, B, K}, δ, q_1, K, ø)

1) $\delta(q_1, 1, K) = \{ (q_2, A), (q_2, B) \}$
2) $\delta(q_2, 0, A) = \{ (q_2, \varepsilon) \}$

Niz: 10

(4) Nedeterministički PA

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Niz: 10

$(q_1, 10, K)$

(4) Nedeterministički PA

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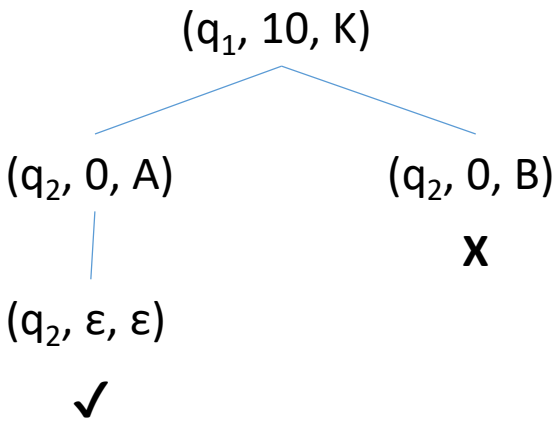

(5) PA prihvatljivim stanjem -> PA praznim stogom

PA M_1 = ($\{q_0, q_1, q_2, q_3\}$, {a, b, c, d}, {A, B, C}, δ, q_0, A, $\{q_3\}$)

1) ---
2) ---
3) ---

PA M_2 =

(5) PA prihvatljivim stanjem -> PA praznim stogom

PA $M_1 = (\{q_0, q_1, q_2, q_3\}, \{a, b, c, d\}, \{A, B, C\}, \delta, q_0, A, \{q_3\})$

1) ---
2) ---
3) ---

PA $M_2 = (\{q_0, q_1, q_2, q_3, q_0', q_e\}, \{a, b, c, d\}, \{A, B, C, X_0\}, \delta', q_0', X_0, \emptyset)$

(5) PA prihvatljivim stanjem -> PA praznim stogom

PA $M_1 = (\{q_0, q_1, q_2, q_3\}, \{a, b, c, d\}, \{A, B, C\}, \delta, q_0, A, \{q_3\})$

1) ---
2) ---
3) ---

PA $M_2 = (\{q_0, q_1, q_2, q_3, q_0', q_e\}, \{a, b, c, d\}, \{A, B, C, X_0\}, \delta', q_0', X_0, \emptyset)$

0) $\delta'(q_0', \varepsilon, X_0) = \{ (q_0, AX_0) \}$
1) ---
2) ---
3) ---
4) $\delta'(q_3, \varepsilon, A) = \{ (q_e, \varepsilon) \}$
5) B
6) C
7) X_0
8) $\delta'(q_e, \varepsilon, A) = \{ (q_e, \varepsilon) \}$
9) B
10) C
11) X_0

(6) PA praznim stogom -> PA prihvatljivim stanjem

PA M_1 = ($\{q_0, q_1, q_2\}$, {a, b, c, d}, {A, B, C}, δ, q_0, A, $\emptyset$)

1) ---
2) ---
3) ---

PA M_2 =

(6) PA praznim stogom -> PA prihvatljivim stanjem

PA M_1 = ($\{q_0, q_1, q_2\}$, {a, b, c, d}, {A, B, C}, δ, q_0, A, ø)

1) ---
2) ---
3) ---

PA M_2 = ($\{q_0, q_1, q_2, q_0', q_f\}$, {a, b, c, d}, {A, B, C, X_0}, δ', q_0', X_0, $\{q_f\}$)

(6) PA praznim stogom -> PA prihvatljivim stanjem

PA $M_1 = (\{q_0, q_1, q_2\}, \{a, b, c, d\}, \{A, B, C\}, \delta, q_0, A, \emptyset)$

1) ---
2) ---
3) ---

PA $M_2 = (\{q_0, q_1, q_2, q_0', q_f\}, \{a, b, c, d\}, \{A, B, C, X_0\}, \delta', q_0', X_0, \{q_f\})$

0) $\delta'(q_0', \varepsilon, X_0) = \{ (q_0, AX_0) \}$
1) ---
2) ---
3) ---
4) $\delta'(q_0, \varepsilon, X_0) = \{ (q_f, \varepsilon) \}$
5) q_1
6) q_2

(7) KNG -> PA praznim stogom

G = ({S, A, B}, {a, b}, P, S)

P:

1) S -> bBA
2) A -> aS
3) A -> aB
4) B -> b

PA M =

(7) KNG -> PA praznim stogom

G = ({S, A, B}, {a, b}, P, S)

P:

1) S -> bBA
2) A -> aS
3) A -> aB
4) B -> b

PA M = ({q}, {a, b}, {S, A, B}, δ, q, S, ø)

(7) KNG -> PA praznim stogom

G = ({S, A, B}, {a, b}, P, S)
P:

1) S -> bBA
2) A -> aS
3) A -> aB
4) B -> b

PA M = ({q}, {a, b}, {S, A, B}, δ, q, S, ø)
δ(q, b, S) = { q, BA } 1)
δ(q, a, A) = { (q, S), (q, B) } 2) 3)
δ(q, b, B) = { (q, ε) } 4)

(8) TS

Zadan je TS $M=(\{q_0, q_1, q_2, q_3, q_4\}, \{0, 1\}, \{0, 1, X, Y, B\}, \delta, q_0, B, \{q_4\})$ sa sljedećim prijelazima:

1. $\delta(q_0, 0)=(q_1, X, R)$
2. $\delta(q_1, 0)=(q_1, 0, R)$
3. $\delta(q_2, 0)=(q_2, 0, L)$
4. $\delta(q_1, 1)=(q_2, Y, L)$
5. $\delta(q_2, X)=(q_0, X, R)$
6. $\delta(q_0, Y)=(q_3, Y, R)$
7. $\delta(q_1, Y)=(q_1, Y, R)$
8. $\delta(q_2, Y)=(q_2, Y, L)$
9. $\delta(q_3, Y)=(q_3, Y, R)$
10. $\delta(q_3, B)=(q_4, B, R)$

Niz: 01

Sadržaj trake lijevo od glave	Stanje	Sadržaj trake desno od glave	Funkcija prijelaza

(8) TS

Zadan je TS $M=(\{q_0, q_1, q_2, q_3, q_4\}, \{0, 1\}, \{0, 1, X, Y, B\}, \delta, q_0, B, \{q_4\})$ sa sljedećim prijelazima:

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2. $\delta(q_1, 0)=(q_1, 0, R)$
3. $\delta(q_2, 0)=(q_2, 0, L)$
4. $\delta(q_1, 1)=(q_2, Y, L)$
5. $\delta(q_2, X)=(q_0, X, R)$
6. $\delta(q_0, Y)=(q_3, Y, R)$
7. $\delta(q_1, Y)=(q_1, Y, R)$
8. $\delta(q_2, Y)=(q_2, Y, L)$
9. $\delta(q_3, Y)=(q_3, Y, R)$
10. $\delta(q_3, B)=(q_4, B, R)$

Niz: 01

Sadržaj trake lijevo od glave	Stanje	Sadržaj trake desno od glave	Funkcija prijelaza
ε	q0	01BBB...	1.
X	q1	1BBB...	4.

(8) TS

Zadan je TS $M=(\{q_0, q_1, q_2, q_3, q_4\}, \{0, 1\}, \{0, 1, X, Y, B\}, \delta, q_0, B, \{q_4\})$ sa sljedećim prijelazima:

1. $\delta(q_0, 0)=(q_1, X, R)$
2. $\delta(q_1, 0)=(q_1, 0, R)$
3. $\delta(q_2, 0)=(q_2, 0, L)$
4. $\delta(q_1, 1)=(q_2, Y, L)$
5. $\delta(q_2, X)=(q_0, X, R)$
6. $\delta(q_0, Y)=(q_3, Y, R)$
7. $\delta(q_1, Y)=(q_1, Y, R)$
8. $\delta(q_2, Y)=(q_2, Y, L)$
9. $\delta(q_3, Y)=(q_3, Y, R)$
10. $\delta(q_3, B)=(q_4, B, R)$

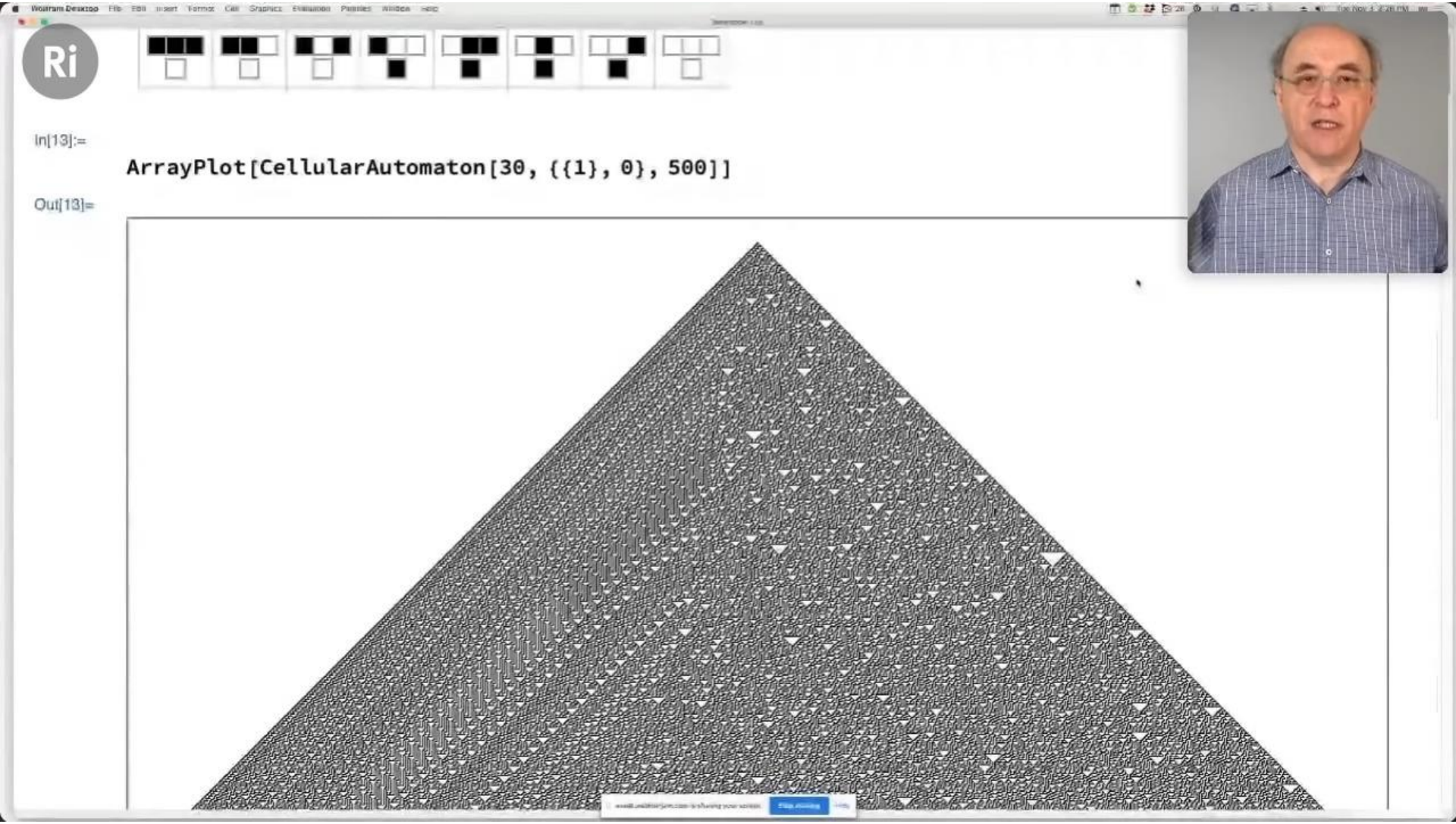
Niz: 01

Sadržaj trake lijevo od glave	Stanje	Sadržaj trake desno od glave	Funkcija prijelaza
ε	q0	01BBB...	1.
X	q1	1BBB...	4.
ε	q2	XYBBB...	5.
X	q0	YBBB...	6.
XY	q3	BBB...	10.
XYB	q4	BB...	prihvati

Linkovi, za zainteresirane

Computation and the Fundamental Theory of Physics - with Stephen Wolfram

https://www.youtube.com/watch?v=qoDZKlcdPNM



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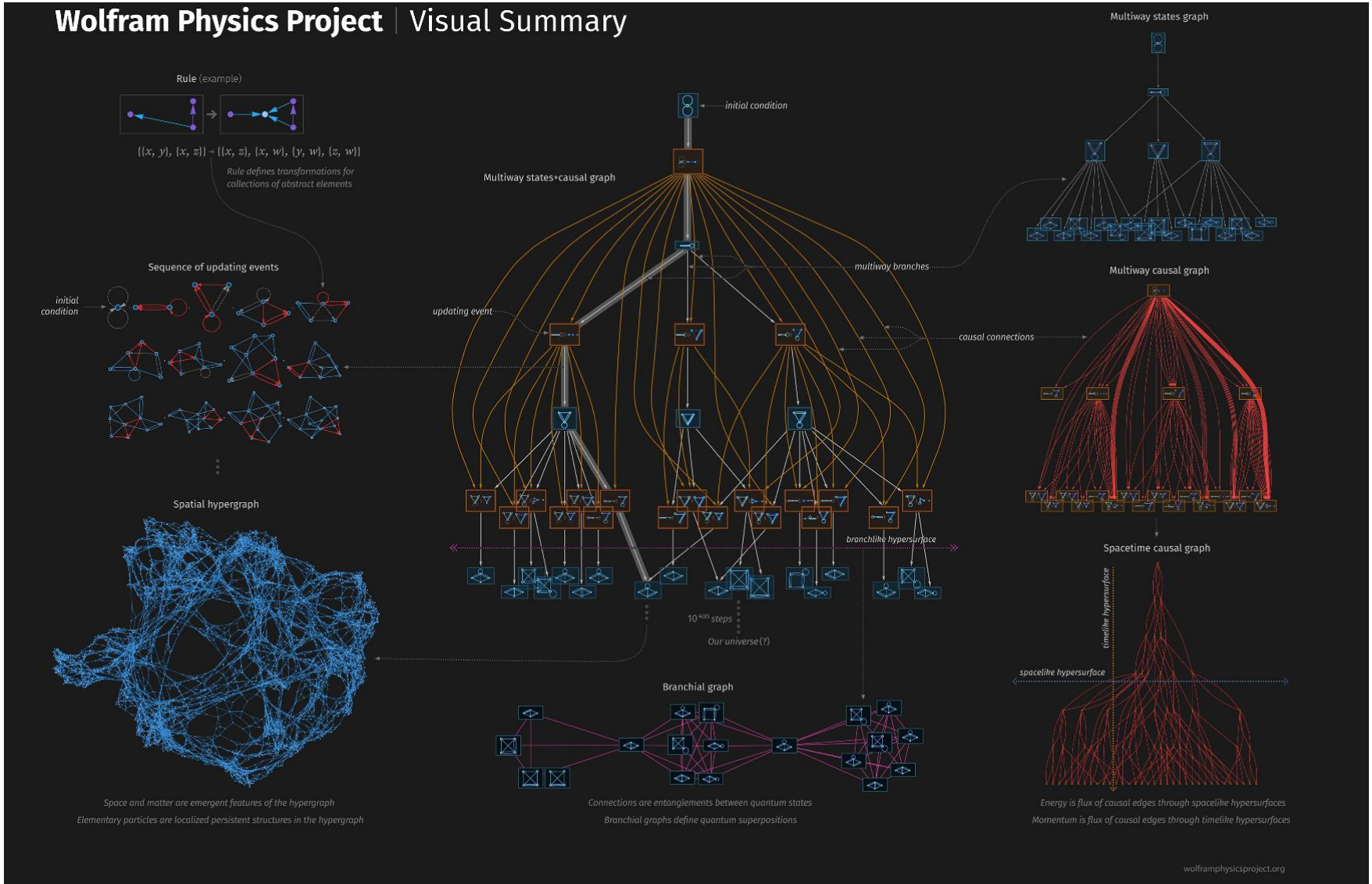

Gödel, Escher, Bach: an Eternal Golden Braid,
also known as GEB, is a 1979 book by Douglas Hofstadter.

https://www.goodreads.com/book/show/24113.G_del_Escher_Bach

Douglas Hofstadter's book is concerned directly with the nature of “maps” or links between formal systems. However, according to Hofstadter, the formal system that underlies all mental activity transcends the system that supports it. If life can grow out of the formal chemical substrate of the cell, if consciousness can emerge out of a formal system of firing neurons, then so too will computers attain human intelligence. Gödel, Escher, Bach is a wonderful exploration of fascinating ideas at the heart of cognitive science: meaning, reduction, recursion, and much more.