Kriptovalute

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5. MAJ 2022

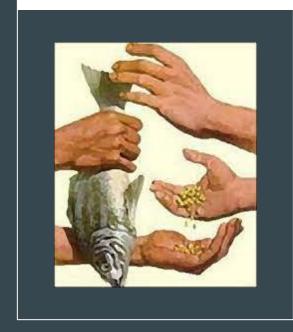
Petar Rondović 167/2017

Matematički fakultet, Univerzitet u Beogradu

Predmet: Računarstvo i društvo

Profesor: Sana Stojanović Đurđević

Kratak uvod o razvoju novca



Razmena





Papirne novčanice



Bezgotovinsko plaćanje

Plaćanje bez ikakvog fizičkog kontakta sa novcem.

Svodi se na to da banke u svojim bazama podataka prate transakcije i održavaju stanje računa svojih korisnika.



IK #1		BAN	NK #2
+ £52.00		CECILLE	+ £445.00
- £5712.00		TAMICA	- £4981.00
+ £1593.00		LEANDRA	+ £23.00
	+ £52.00 - £5712.00	+ £52.00 - £5712.00	+ £52.00 CECILLE - £5712.00 TAMICA

Kriptovalute

Sta je kriptovaluta?

Kriptovaluta je decentralizovan oblik digitalne imovine koja se koristi kao sredstvo razmene koristeći kriptografiju kao način zaštite podataka.

Kako funkcioniše?

Postoji glavna knjiga koja sadrži sve transakcije napravljene odgovarajućom kriptovalutom. Svi korisnici imaju kopiju glavne knjige i da bi se neka transakcija odobrila, mora da se poklapa sa većinom kopija.

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LEANORA	- £6948.00	JACKLYN	- £8418.00		LEANORA	- £6948.0
TONEY	+£324.00	STEPANIE	+ £8728.00		TONEY	+ £324.00
ERROL	+ £8544.00	LACRESHA	+ £8083.00		ERROL	+ £8544.0
DONITA	- £6615.00	MAREN	- £8719.00		DONITA	- £6615.00
HALEY	+ £5154.00	OSWALDO	+£7455.00		HALEY	+ £5154.00
WILBER	+ £5630.00	ISA	+ £3791.00		WILBER	+ £5630.00
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	MAREN	- £8719.00	DONITA	- £6615.00	MAREN	- £8719.00
	OSWALDO	+ £7455.00	HALEY []	+£5154.00	OSWALDO	+£7455.00
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	LACRESHA	+ £8083.00	ERROL	+£8544.00	LACRESHA	+ £8083.00
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ĺ	OSWALDO	+ £7455.00	HALEY	+ £5154,00	OSWALDO	+ £7455.00
Í	ISA	+ £3791.00	WILBER	+ £5630.00	ISA	+ £3791.00

BARRIE	- £7590.00	VINA	- £9082.00
KYMBERLY	+£8917.00	JERAMY	+£9139.00
KATHRYN	+£1122.00	PEARL	+£4752.00
SHAN.	£9506.00	JOSEPHINA	- £82.00
ADALBERTO	+£2760.00	ELWANDA	+£5742.00
RAYNA	+ £281.00	EMMIE	+ £3391.00
DARRIE	- E7590.00	VINA	- £9082.00
KYMBERLY	£8917.00	JERAMY	+ £9139.00
KATHRYN	+ E1122.00	PEARL	+ £4752.00
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Blockchain

Blockchain je konkretan oblik organizacije glavne knjige.

Svaka transakcija predstavlja jedan enkriptovani blok u lancu blokova.

Softver zapisuje nove transakcije nakon čega ažurira sve kopije *blockchain-*a.

Za sprečavanje prevara, koristi se jedna od dve tehnike validacije: *proof of work* ili *proof of stake*



Tehnike validacije

Proof of work

Ovo je tehnika gde se generiše matematički problem za koji se računari trkaju da ga reše.

Rešavanjem problema se pomaže pri verifikaciji transakcije koja se potom dodaje u lanac blokova.

Računar koji prvi reši problem je nagrađen.

Proof of stake

Ovo je tehnika gde se za odobravanje verifikacije bira jedan korisnik iz grupe korisnika koji su uložili svoje kriptovalute.

Što je veći ulog, veća je šansa da korisnik bude izabran.

Ako dođe do odobravanja nevažeće transakcije, gubi se deo uloga.

Učestvovanje u validaciji se naziva rudarenje (*mining*) i nagrađuje se kriptovalutom.

Prednosti kriptovaluta

- Decentralizacija
- Nisu potrebne banke
- Internacionalna plaćanja bez brige o kursevima valuta

Mane kriptovaluta

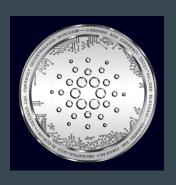
- Troše puno energije
- Promenljivost vrednosti
- Nisu prihvaćene svuda

Primeri

Bitcoin



Cardano



Ethereum



Litecoin



NFT (Non Fungible Token)

NFT su tokeni zasnovani na *blockchain* tehnologiji koji reprezentuju jedinstvenu imovinu kao što je umetničko delo ili digitalni sadržaj. Moze se smatrati trajnim digitalnim sertifikatom vlasništva neke imovine, bilo fizičke ili digitalne.

Dizajnirani su da budu kriptografski proverljivi, jedinstveni ili jako retki i lako prenosivi.

Kreiraju se tako što vlasnik potpiše *blockchain* transakciju koja sadrži fundamentalne detalje tokena, koja se emituje *blockchain*-u koji aktivira funkciju pravljenja tokena i pripisuje ga odgovarajućem vlasniku.

Primeri



Vlasnik *twitter-*a je prodao *NFT* svog prvog *tweet-*a za 2.9 miliona dolara



Jedan umetnik je prodao *NFT* svih svojih dela za priblizno 69 miliona dolara

Hvala na pažnji