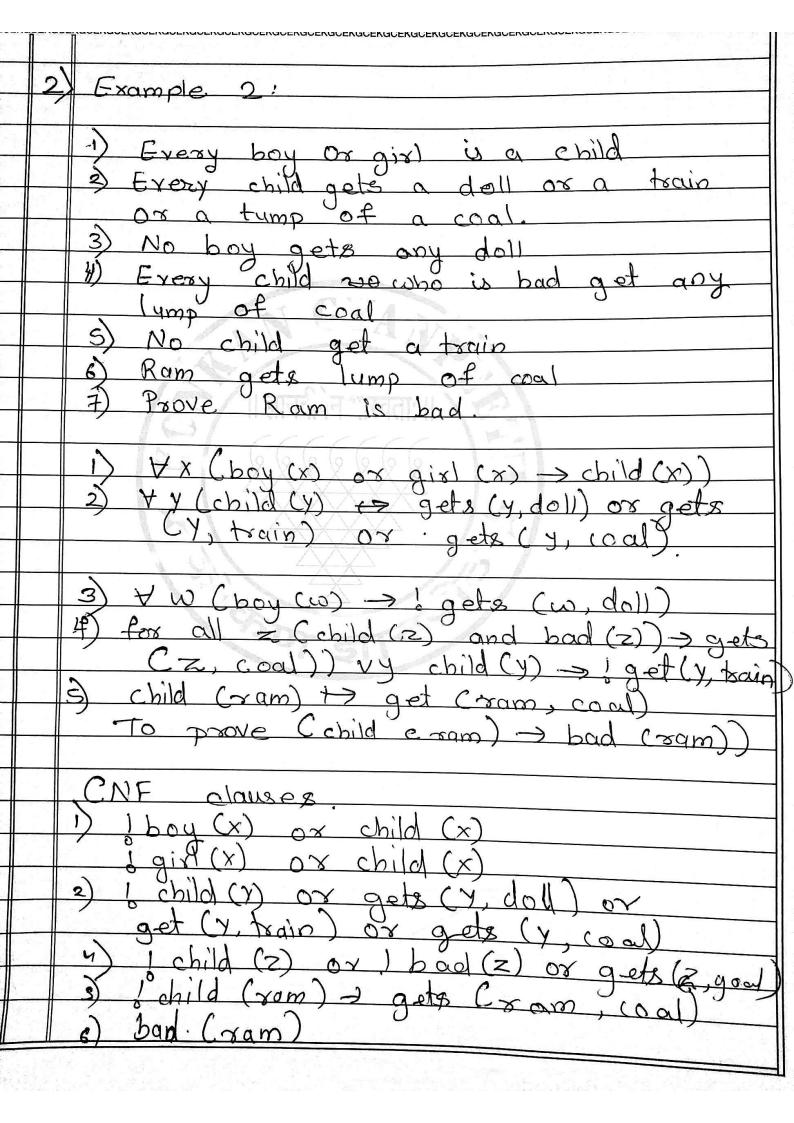
Date: Assingnment NO: 2 Name: ShaShank · B. Pandey ROIND: 43 Class: B.E- I.T Subject: 18 LAB DOP DOA Sign

Salve the following with forward chaining or backward chaining or resolution  Cony one) use predicate logic as language of knowledge representation clearly.  Specify the fact inference rule used.  Egil  Every child sees some with not witch has both a black cut & a pointed not.  Every witch is good or badd.  Every witch is good or badd.  Every child who sees any good witch get candy.  Prove: Every child gets condy.  Prove: Every child gets condy.  Prove: Every child gets condy.  Axay (child(x) witch(y) > sees (x,y).  Ay (witch(y) > how (y, black cut)^n.  has  (y, Pointed hat).  Ty (witch(y) > good(y) x bad(y).  Ex (sees(xx) > (witch(y) > good(y)).  get (x, condy).	CEKGCI	EKGCE	KGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCE
Cany one) use predicate logic as language of knowledge representation Clearly  Specify the fact inference owle used  Fg: 1  Every child sees some witch not witch has both a black cut & a pointed not  Every witch is good ox badd  Every child who sees any good witch get candy  Prove: Every child gets candy  Facts into fal.  1 **YAy (child(X) witch(y) > sees(X,Y))   **Ay (witch(y) > has (Y, black cut) ^  has  (Y, Pointed hat)  Ty (witch(y) > good(y) × bad (Y)  EX (sees(X,Y) > (witch(Y) > Jond(Y))  EX (sees(X,Y) > (witch(Y) > Jond(Y))			
Cany one) use predicate logic as language of knowledge representation Clearly  Specify the fact inference only used  Fig. 1  Every child sees some witch not witch has both a black rat & a pointed not  Every witch is good ox badd  Every child who sees any good witch get candy  Prove: Every child gets candy  Facts into fal.  1 **YAy (child(x) witch(y) > sees(x,y))   Ty (witch(y) > has (y, black cait)  has  (y, Pointed hat)  Ty (witch(y) > good(y) x bad (y)  Ex (sees(x,y) > (witch(y) > Jand(y))		Q1	Salve the following with forward chaining
Every child sees some with not witch has both a black rat of a pointed not  Every witch is good or badd  Every child who sees any good witch get candy  Prove: Every child gets candy  Facts into fal.  IXAY (child(x) witch (y) > sees (x,y)  >> Iy (witch (y) >> has (y, black cat)^1  has  (y, Pointed hat)  Iy (witch (y) >> good(y) v bad (y)  Ex ((sees(x,y) >> (witch (y) >> good(y))			or backward chaining or resolution
Every child sees some with not witch has both a black rat of a pointed not  Every witch is good or badd  Every child who sees any good witch get candy  Prove: Every child gets candy  Facts into fal.  IXAY (child(x) witch (y) > sees (x,y)  >> Iy (witch (y) >> has (y, black cat)^1  has  (y, Pointed hat)  Iy (witch (y) >> good(y) v bad (y)  Ex ((sees(x,y) >> (witch (y) >> good(y))	-		Cany one) use prédicate logic as language
Eg: 1  Every child sees some witch not witch has both a black cut & a pointed not  Every witch is good or boold  Every child who sees any good witch get candy  Prove: Every child gets candy  Facts into fal.  I XAY (child(x) witch(y) > sees(x,y))  > Ty (witch(y) > has (y, black cut)^n has  (y, Pointed hat)  Ty (witch(y) > good(y) x bad (y)  Ex (sees(xx) > (witch(y) > good(y))	+		of knowledge representation clearly
Freny child sees some witch not witch  has both a black cut & a pointed not  Every witch is good or badd  Every child who sees any good witch  get candy  Prove: Every child gets candy  Facts into fal.  1 ** **Y ** Ay (child()) witch (y) -> sees (x,y)  mas  (y, Pointed hat)  Ty (witch (y) -> good(y) v bad (y)  Ex ((sees(xx)) -> (witch (y) -> good(y))			Specity the fact interence issue assert
Every witch is good or badd  Every child who sees any good witch  get candy  Prove: Every child gets candy  Facts into fal.  I TXAY (child(x) witch(y) > sees(x,y))  ~ Jy (witch(y) > has (y, black cat)^  has  (y, Pointed hat)  Ty (witch(y) > good(y) v bad (y)  Ex (sees(x,y) > (witch(y) > good(y))			€g:-1
Every witch is good or badd  Every child who sees any good witch  get candy  Prove: Every child gets candy  Facts into fal.  I TXAY (child(x) witch(y) > sees(x,y))  ~ Jy (witch(y) > has (y, black cat)^  has  (y, Pointed hat)  Ty (witch(y) > good(y) v bad (y)  Ex (sees(x,y) > (witch(y) > good(y))		19	Frezy child sees some witch not witch
Every child who sees any good witch  get candy  Prove: Every child gets candy  Facts into fal.  1 +XAy (child(x), witch (y) > sees (x,y))  ~ Jy (witch (y) > has (y, black cat)^  has  (y, Pointed hat)  Ty (witch (y) > good(y) x bad (y)  Ex ((sees(x,y) > (witch (y) > good(y)),			has both a black cut & a pointed not
Prove: Every child gets candy  Facts into fal.  YXAY (child(x) , witch (y) -> sees (x,y))  ~ Jy (witch (y) -> has (y, black cait)^  has  (y, Pointed hat)  Ty (witch (y) -> good(y) v bad (y)  Ex (csees(x,y) -> (witch (y) -> good(y))		17	Every witch is good or badd
Prove: Every child gets candy  Facts into fal.  YXAY (child(x) , witch (y) -> sees (x,y))  ~ Jy (witch (y) -> has (y, black cait)^  has  (y, Pointed hat)  Ty (witch (y) -> good(y) v bad (y)  Ex (csees(x,y) -> (witch (y) -> good(y))			
Prove: Every child gets candy  Facts into fal.  YXAY (child(x) , witch (y) -> Sees (x,y))  ~ Jy (witch (y) -> has (y, black cat)^  has  (y, Pointed hat)  Ty (witch (y) -> good(y) v bad (y)  Ex (csees(x,y) -> (witch (y) -> good(y))			Every child who sees any good witch
Facts into fal.  1		1	g-ex canag
Facts into fal.  1			
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Ty (witch (y) -> has (y, black cat) 1  has  (y, Pointed hat)  Ty (witch (y) -> good(y) v bad (y)  Ex (csees(x,y) -> (witch (y) -> good(y))			Facts into fal.
Ty (witch $(y) \rightarrow g \text{ ood}(y) \times 6ad (y)$ )  Ex (csees(x,y) $\rightarrow$ (witch $(y) \rightarrow g \text{ ond}(y)$ )		1	7XAy (child(x) , witch (y) -> Sees (x,y))
Ty (witch $(y) \rightarrow g \text{ ood}(y) \times 6ad (y)$ )  Ex (csees(x,y) $\rightarrow$ (witch $(y) \rightarrow g \text{ ond}(y)$ )			~ 7 y (witch (y) -> has (y, black ant) 1
Fy (witch (y) -> good(y) v bad (y))  Ex (csees(x,x) -> (witch (y) -> good(y))			
			(Y, Pointed hat)
Ex (csees(x,x) -> (witch (y) -> good(y))  get (x, candy)			
get (x, candy) (Witch (y) -> good (y))>			ty (witch (y) > good(y) v bad (y)
get (x, candy)			EX ( (sees (x,x) -> (Witch (y) -> good (y)))
			get (x, condy)

into CNF FxAy (child (x), witch (x) -> sees (x, y) > ~ Jy, (with() -> has(y, black hat) > v Jy (witch (y) > has ( v, Pointed hat) ATY (witch (y) -> good (x) YY (witch (y) -> bad CY)) 3) Ex [ (sees (x,y) > witch (y) > good (y)) -> gets (x, candy) 5) by [seen (x,y) -> has (y, pointed hat) ~ Yy (Seen (x,y) > has (x, black hat) Sees (x,y) witch (y) Vseen (x, y) ¿ good y bad/y3 v Seen (x, (good) n seen (x, bad) has (y, 2) E Y/good V bad Seen (x, good) V seen (x, bad) { Z/black cat has (good pointed nats ( get (x, cardy) Seen (x, good) v has (good pointed hat) v gets Seen (x, good) V gets (x, candy) gets (x, candy) got (x, candy



GCEKG	DEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGC	Date:
Q2	STRIPS Language	ADL
a	literals to the statos	Can support both positive & negative
	tox eq: A valid setence	literal for ego-Same Sentence is expres
6	Q TO STORY	Stands for Aebion Description
	Solver .	Language
e	Makes use of closed 3) world assumption (i,e) un methored literals no (false	sould cossombyon
	false	literals: are unko

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P(B)  O.001 (Buglary)	(Eaxt	bquake)	D-002
	Alaxm)		
John (calls)		Mary	
	B	E T F	P(A) 0-95 0-94
	F/2	F	0.001
A P(T) T 0.09 F 0.05	5113	A T F	P(M) 0.70 0.01
The topology of that Burglory the probably	of the r	azthquak	indicate affect

	CEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKG
#	Ot the alaxms going off.
C	of the alaxins going off. whether John and many call depends only
-	
	they do not perceive any burglances directly they do not notice minor earthquakes and
	they do not confer before calling
	Mary listening to load music and John
	Confusion about the contraction of the
	of alasm can be read from network
	only implicity as uncertainly associated
	to calling at work.
	7 01 330310
1	de probabilité d'alle 11 e
	ne probability acholly Summarise potential
-	TOTALLE Set of Cixcum Etances
l <sub>a</sub>	The alarm might full to go off due to high
1/	amina power tribuse dead
	cut insies a dead mouse steich
	unside the bell etc.
-	the condition probability tables in n/w
	alves probability for values of
٩	variable depending an combination of value for the parent nodes
	value for the Daxent node
	TOUCH TOUCH
_	To consol a fill P
	En general a table to a Boolean
	sariable with k parents contain 2x
	independently. Specific probabilities.

KGCE	GCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEKGCEK
	A general enty in Joint distribution
	A general enty in joint distribution is probability of a conjuction of passicular assignment to each variable P (x=x,n=n xn=xn) obbseviated
	as $e(x_1, \dots, x_n)$
	The value of this entry is P (x,xn)= Ti-1, np (1, Paxents (xi))
	7);-1, np (1, Paxents (xi))
	= P (inman ~ bo ~ e)
	= P(j la) (P (mla) P(alnbnne) P (nb) e (n e)
	20.09 x 0.001 x 0.001 x 0.998
	= 0.000 628
	Bayesian Network
	mary
$\downarrow$	calle John Calle
	(Earth quake)
	R verte la suite de la suite destaine de la suite de l
	(Alaxm)