Prolog Programming Assignment Date:

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Name :- Rahul Ravindra Shinde ROIL NO. 3- 64 class 3- BE-IT subject :- Is Lab Docently भास्तताMark DOP

Prolog Programming Assignment

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Q. 1		How does the queries in kb.pl file are
1		excecuted?
		, pisant king
4	=>	code 3- loves (vincent, mia).
	. :	loves (marcellus, mia).
		loves (pumpkin, honey-bunny).
* 1		loves (honey-bunny, pumptin).
4 = 9 -1, 1		
		jealous (X,Y) :-
Q 2 <sup>3</sup>		loves (x, z),
		loves (Y,Z)
5	ř	Querylo 2 loves (x, mia)
		Output & x = vincent
		X = Marcellus
0		Explanation 8-
		-Here as we know vincent loves Mia as well
-		-Thus the kb assumes that x is either
		Vincent or marcellys.
		VINCENC DE PIOCECCIONES
		Query 20 2 - Jealous Cx, x).
		Output of X = Y X = Vincent
		x = vincent
		Y = marellus
. 11.1	•	X = marcellus
	1	X = Y, Y = pumpkin
		X = Y, Y = HONEY - bunny.

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	7	Explanation?
		- As there is no fixed parameters in,
		our query.
		- The query will produce output of every
		Jealous (x, Y) pair on our prolog code.
		- The jealous () rule follows
		Jealous (X, Y) 3- loves (X,Z), loves (Y,Z).
		- Initially, x and Y both were associated
		to vincent! i.e. self association. It
		then follows receive property for
		the restrofitherprolog code.
Q.2		How does the queries in lists. Pl file
		are executed?
走		
- 3	=>	code 3-1 Suffix (XS, XS) 3-
		append C-(XS, XS).
		Prefix (XS, YS) 3-
1		append (YS, -, xS)
		CITIZENT CXC XC ) 0-
		subjist (XS, YS) &- suffix (XS, ZS)
	1	Prefix (ZS, YS).
		78et(3 (2), 15).
		Query 18 2 Sublist ([a,b,c,d,e],[c,d]).
120		Output à True
		The second secon
		•
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	-	Explanation 3-
		- A sublist procedure looks for a match
		between the first elements of the sub-
		list and the main-list.
		- Here, [c,d] is the sub-list of the
		main list [a, b, c, d, e].
		- As the main list contains the subject
		(c,d), the output is true. Else, the
		output would have been false.
		Query 2 : 2- suffix ([a,b,c],25)
		19/ ////////
		output 3 250 & Each, c]
		ZS = Thich
70 t	100	19 - 1 - 25 = CC - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
150	3/1	The ZS E July 100 Days
( )	•	false
41 - 0	}	Explanation 0=
		- suffix in general elimnates the tront
		elements from a list.
1 1	ロング	- Here, by using suffix procedure,
		[a,b,c] elements are removed from
		a and continues until all the elements
		are removed.
		- As there are no more elements in
		the 19st, the output will be displayed
No list	1/1/	ast-false must de anaton
2 1	1	- record of a state of a state of the state
	<del>                                     </del>	deforms . Le mile - M

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Q·3		Programming create a Prolog code to find		
		factorial of a number?		
in the t	., 4			
	=>			
r. · ·	1	factorial (N, F):		
		0/3 - NO NO 15 - NO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
+ 7.00	30	and the Warts-Wi- Ligary ont of the		
1111	7 B	factorial (N, E,)		
		N'S NIX FILM		
1		Query ? ? ( = factorial C3, w)		
		output's w=8000		
Q.4		In examples data set movies. Pl write		
1		query strings and results of query execution for any of 5 tasks 3-		
		execution for any of 5 tasks 3-		
28	1	The second of th		
	a)	In which year was the movie American		
7.41	· - j	Beauty released?		
		a g v v v o Comparis cua la parte. V1		
97	* 1	Query : 2- movie (american-beauty, y)		
12 1	/	- 1000		
	- 15	output Y = 1999		
	1-1	Find the movies relased in year 2000		
111	(ש	Query: 3 1.8 movie (M, 2000).		
Lag wifers	1"	100 100 100 100 100 100 100 100 100 100		
		Output: M = down = trom=the= mountain  M = 0-brother_where_art_ thou		
		M=9host-world		
	_	11- 110-31 20-010.		

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	c)	Find movies released before 2000.
6-1 31 <sup>(10)</sup>	4.	Query: 2 - movie (M, Y), Y < 2000
		the state of the s
7.1		output: M = american_beauty Y = 1999
	- y 7	1999 · · · · · · · · · · · · · · · · · ·
7.5	y. 1	of the state of th
		M = anna
		Y = 1987
		The state of the s
		M=barton_fink
100	. •	Y=1994
,		
	a)	Find the movies released after 1990
	3	query: 12 - moviec M, Y), Y>1990.
	- 1	
		output: M= american _ beauty
		Output : M= american _beauty
		The second secon
		M = barton_fing
		Y = 1991
	e)	Find a director of a movie in which
		Scalet Johansson appenared.
		Query : 9 - actress (M', Scarlet Johansson).
		dirctor(M, 0)
		Outputs ospeter webber
		Outputs o=peter_webber M=girs_with_a_penrl_earnin
		11-9113-WINDER-FERRINIT

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9.5	30	Draw a family tree of you leave arbitary
		family. Which has the following
	-, -	relations mother, father, daughter,
		son, grandson, grand mother, sibling
		uncie person male, female, you
		need to convert it into KB and
		write alteast oqueries and Guory
		results on your KB.
	=>	Diagram 2-
		/ <u>स्थिति । जासतीपेन आख्तामा / स्थिति</u>
		Jack Helen Onver Sophiee
		The state of the s
		Ali Jess Lily James
		Harry
		Siman
		The street of th
		Family Tree!
		Tribe A.Y.
		Query 1: 2-mother_of (x,jess).
r	1 7 1 -	Output & x = Helen
,		and the second property of the second
		Query 2 & 2. parent_of (x, simon)
	H + 1,	Query 2 & 2 parent_of (x, simon) Output & X = Jess
		1. 1. 1.
		The file of the second
7		· · · · · · · · · · · · · · · · · · ·

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	Query 3 0 2 - Sister- of Cx, 1914).	
	Query 3 % 2 - Sister- of Cx, 1914).  Output : X = jess	
	Queru 48 9 - parent_of (x. harry).	
	Query 48 2 - parent_of (x, harry).	
	x = janes	
	Query 5 & 7 aunt_of(x, simon).	
	outputs x= lily	
. ~	Query 3 % 2 grandfather_of (x, harry)	· ·
	Query 3 2 2 grandfather_of (X, harry) output 3 x = jack.	
	**	