Multilingual Question Answering Over Linked Data

QALD-3: Evaluation results

Workshop website: http://www.sc.cit-ec.uni-bielefeld.de/qald

Results ¹ for DBpedia (test):

	Total	Processed	Right	Partially	Recall	Precision	F-measure
squall2sparql	99	99	80	13	0.88	0.93	0.90
CASIA	99	52	29	8	0.36	0.35	0.36
Scalewelis	99	70	32	1	0.33	0.33	0.33
RTV	99	55	30	4	0.34	0.32	0.33
Intui2	99	99	28	4	0.32	0.32	0.32
SWIP	99	21	15	2	0.16	0.17	0.17

Results 1 for MusicBrainz (test):

	Total	Processed	Right	Partially	Recall	Precision	F-measure
SWIP	50	33	24	2	0.51	0.51	0.51

DBpedia questions answered by all systems:

- 21 What is the capital of Canada?
- 22 Who is the governor of Wyoming?
- 30 What is the birth name of Angela Merkel?
- 68 How many employees does Google have?

DBpedia questions answered by no system:

- 14 Give me all members of Prodigy.
- 16 Does the new Battlestar Galactica series have more episodes than the old one?
- 92 Show me all songs from Bruce Springsteen released between 1980 and 1990.
- 96 Give me all B-sides of the Ramones.

 $^{^{1}}$ The column processed states for how many of the questions the system provided an answer, right specifies how many of these questions were answered with an F-measure of 1, and partially specifies how many of the questions were answered with an F-measure strictly between 0 and 1.

squall 2 sparql

Total 99	· · · · · · · · · · · · · · · · · · ·	easure 0.9									
ID	Question		R	P	F						
24	Who is the dbp:father of res:Elizabeth_II?		1.0	1.0	1.0						
25	Which yago:StatesOfTheUnitedStates has the latest dbp:a	admittancedate?	1.0	1.0	1.0						
26	How many officialLanguage-s of res:Seychelles are there?		1.0	1.0	1.0						
27	res:Sean_Parnell is the dbp:governor of which 1.0 1.0 1.0 yago:StatesOfTheUnitedStates?										
20	What is the height of res:Michael_Jordan?		1.0	1.0	1.0						
21	What is the capital of res:Canada?		1.0	1.0	1.0						
22	Who is the dbp:governor of res:Wyoming?		1.0	1.0	1.0						
23	Has 'Prince Harry' the same dbp:mother as 'Prince Willia	am'?	1.0	1.0	1.0						
28	Give me all Film-s whose director is res:Francis_Ford_Cop	pola.	1.0	1.0	1.0						
29	Give me all Person-s that are a starring of a Film a direct of which is res: William_Shatner.	or and a starring	0.82	1.0	0.9						
4	What is the numberOfStudents of res:Vrije_Universiteit?		1.0	1.0	1.0						
8	What is a dbp:country of res:Himalayas?		1.0	1.0	1.0						
59	Which yago:StatesOfTheUnitedStates share the dbp res:Utah?	p:timezone with	1.0	0.89	0.94						
58	What is the dbp:timezone of res:Salt_Lake_City?		1.0	1.0	1.0						
55	Which yago:GreekGoddesses have dbp:abode res:Mount_C)lympus?	1.0	1.0	1.0						
54	What are the dbp:nickname of res:San_Francisco?		1.0	1.0	1.0						
57	Give me all Astronaut-s whose mission is res:Apollo_14.		1.0	1.0	1.0						
56	Which ?date are res:Hells_Angels dbp:founded?		1.0	1.0	1.0						
51	Give me all yago:FrisianIslands whose country is res:Neth		1.0	1.0	1.0						
50	Has res:Cuban_Missile_Crisis an earlier date than res:Bay_	.of_Pigs_Invasion?	1.0	1.0	1.0						
53	What is the dbp:leaderParty of res:Lisbon?		1.0	1.0	1.0						
52	OUT OF SCOPE		1.0	1.0	1.0						
88	Which Film-s have starring and director res:Clint_Eastwo		1.0	1.0	1.0						
89	Which Place is the restingPlace of 'Juliana Netherlands'?		1.0	1.0	1.0						
82	Give me all yago:AmericanInventions.		1.0	1.0	1.0						
83	What is the elevation of res:Mount_Everest?		1.0	1.0	1.0						
80	Give me all Book-s whose author is res:William_Goldman berOfPages is greater than 300.	and whose num-	1.0	1.0	1.0						
81	Which Book-s has author res:Jack_Kerouac and res:Viking_Press?	has publisher	1.0	1.0	1.0						
86	What is the largestCity of res:Australia?		1.0	1.0	1.0						
87	Who is the musicComposer of res:Harold_and_Maude?		1.0	1.0	1.0						
84	Who is the creator of res:Captain_America?		1.0	1.0	1.0						
85	What is the populationTotal of the capital of res:Australi	a?	1.0	1.0	1.0						
3	Who is the leader of res:Berlin?		1.0	1.0	1.0						
7	What is the dbp:admittancedate of res:Alberta?		1.0	1.0	1.0						

100	Who has product res:Orangina?	1.0	1.0	1.0
39	Give me all Company-es whose location is res:Munich.	0.60	1.0	0.75
38	What is the populationTotal of res:Maribor?	1.0	1.0	1.0
33	Give me all Organisation-s whose type is res:Nonprofit_organization and whose location is res:Australia.	0.68	0.87	0.76
32	How many spouse-s of res:Nicole_Kidman are there?	1.0	1.0	1.0
31	Give me all yago:CurrentNationalLeaders whose dbp:religion is	1.0	1.0	1.0
	res:Methodism.			
30	What is the dbp:birthName of res:Angela_Merkel?	1.0	1.0	1.0
35	Who is the developer of res:Minecraft?	1.0	1.0	1.0
36	OUT OF SCOPE	1.0	1.0	1.0
37	OUT OF SCOPE	1.0	1.0	1.0
34	What are the battle-s of res:TELawrence?	1.0	1.0	1.0
60	Give me all Lake-s whose country is res:Denmark.	0.8	1.0	0.89
61	How many SpaceMission-s are there?	1.0	1.0	1.0
62	Does res:Aristotle be-influencedBy res:Socrates?	1.0	1.0	1.0
63	Give me all Film-s whose country is res:Argentina.	0.12	1.0	0.22
64	Give me all LaunchPad-s whose operator is res:NASA.	1.0	1.0	1.0
65	What are the instrument-s of res:John_Lennon?	1.0	1.0	1.0
66	What has dbp:shipNamesake res:Benjamin_Franklin?	1.0	1.0	1.0
67	Who are the parent-s of the spouse of 'Juan Carlos I'?	1.0	1.0	1.0
68	What is the numberOfEmployees of res:Google?	1.0	1.0	1.0
69	Has 'Tesla' award 'Nobel Prize Physics'?	1.0	1.0	1.0
2	Who is the successor of res:John_FKennedy?	1.0	1.0	1.0
6	Give me all Person-s whose occupation is res:Skateboarding and whose (na-	0.5	1.0	0.67
00	tionality or birthPlace) is res:Sweden.	1.0	1.0	1.0
99	What is the recordLabel of the Album whose artist is res:Elvis_Presley and	1.0	1.0	1.0
00	whose releaseDate is the earliest?	1.0	1.0	1.0
98	What is the nationality of the creator of res:Miffy?	1.0	1.0	1.0
91 90	Which yago:StatesOfTheUnitedStates has dbp:postalabbreviation 'MN'?	1.0 1.0	1.0 1.0	$\frac{1.0}{1.0}$
93	What is the dbp:residence of res:Prime_Minister_of_Spain? Which Film-s have director res:Akira_Kurosawa and have a later releaseDate	0.29	0.17	0.21
90	than 'Rashomon'?	0.29	0.17	0.21
92	Give me all Song-s whose artist is res:Bruce_Springsteen and whose release-	0	0	0
32	Date has a year between 1980 and 1990.	O	O	O
95	Who is the dbp:author of the anthem of res:Poland?	1.0	1.0	1.0
94	What is the dsp:foundation of the dbp:brewery of res:Pilsner_Urquell?	1.0	1.0	1.0
97	Who is the dbp:artist of res:The_Storm_on_the_Sea_of_Galilee?	1.0	1.0	1.0
96	Give me all dbp:bSide of the Album-s whose artist is res:Ramones.	0	0	0
11	Which FormulaOneRacer has the highest races?	1.0	1.0	1.0
10	What is the dbp:strength of res:New_York_City_Fire_Department?	1.0	1.0	1.0
13	Which SoccerPlayer whose team has league res:Premier_League has the lat-	1.0	1.0	1.0
-9	est birthDate?	Ÿ	Ÿ	Ÿ
12	Give me all WorldHeritageSite whose dbp:year is between 2008 and 2013.	1.0	1.0	1.0
15	Which River has the highest dbp:length?	1.0	1.0	1.0
14	Give me all bandMember-s of res:Prodigy.	0	0	0

17 16	Give me all Automobile-s whose assembly is res:Germany. Has the TelevisionShow that is a dbp:tv of res:Battlestar_Galactica and whose releaseDate is later than the releaseDate of a TelevisionShow ?X that is a dbp:tv of res:Battlestar_Galactica a greater numberOfEpisodes than ?X?	0.42	0.66 0	0.51 0
19	Give me all Person-s whose birthPlace is res:Vienna and whose deathPlace is res:Berlin.	0.67	1.0	0.8
48	Which Place-s whose country is res:United_Kingdom is the headquarter of res:Secret_Intelligence_Service?	1.0	1.0	1.0
49	Which Weapon shares the dbp:designer with res:Uzi?	1.0	0.5	0.67
46	Who has occupation res:Surfing and has birthPlace res:Philippines?	1.0	1.0	1.0
47	OUT OF SCOPE	1.0	1.0	1.0
44	What are the city-es of res:Weser?	1.0	1.0	1.0
45	What are the country-es of res:Rhine?	1.0	1.0	1.0
42	Who is the dbp:spouse of res:Amanda_Palmer?	1.0	1.0	1.0
43	Give me all dbp:breed of res:German_Shepherd.	0	0	0
40	List all Game-s whose publisher is 'GMT'.	1.0	1.0	1.0
41	Who is res:Intel foundedBy?	1.0	1.0	1.0
1	Which Town that has country res:Germany has a populationTotal greater than 250000?	0.30	1.0	0.46
5	Which Mountain has the 2nd highest elevation?	1.0	1.0	1.0
9	Give me all Person-s whose instrument is res:Trumpet and whose occupation is res:Bandleader.	1.0	1.0	1.0
77	Who has dbp:nickname res:Scarface?	1.0	1.0	1.0
76	List the child-s of res:Margaret_Thatcher.	1.0	1.0	1.0
75	Which yago:DaughtersOfBritishEarls ?X have the deathPlace that is the birthPlace of ?X?	0.4	0.86	0.55
74	What is the deathDate of res:Michael_Jackson?	1.0	1.0	1.0
73	res:Benjamin_Franklin has how many child-s?	1.0	1.0	1.0
72	Which yago:StatesOfTheUnitedStates is the dbp:location of res:Fort_Knox?	0	0	0
71	What is the dbp:beginningDate of res:Statue_of_Liberty?	1.0	1.0	1.0
70	Is res:Michelle_Obama the spouse of res:Barack_Obama?	1.0	1.0	1.0
79	Has res:Dutch_Schultz dbp:ethnicity 'Jewish'?	1.0	1.0	1.0
78	Has res:Margaret_Thatcher profession res:Chemist?	1.0	1.0	1.0

CASIA

Total 99	Processed 52	Right 29	Partially 8	Recall 0.36	Precision 0.35		easure 36			
ID	Question							R	Р	F
56	When were	the Hell	s Angels for	ınded?				1.0	1.0	1.0
42	Who is the	husband	of Amanda	a Palmer?	?			1.0	1.0	1.0
60	Give me a l	ist of all	lakes in De	nmark.				0.8	1.0	0.89
62	Did Socrate							1.0	1.0	1.0
89	In which cit	y was th	e former D	utch que	en Juliana b	ouried?		0	0	0
64	Give me all							1.0	0.8	0.89
65	Which instr							1.0	1.0	1.0
67	Who are the	-						0.67	0.4	0.5
68	How many			-	•			1.0	1.0	1.0
83	How high is							1.0	1.0	1.0
81	Which book			-	l by Viking	Press?		1.0	1.0	1.0
86	What is the							1.0	1.0	1.0
53	What is the				0			0	0	0
84	Who create		-					1.0	0.67	0.8
85	How many							1.0	1.0	1.0
24	Who was th		•			1 11 0		1.0	1.0	1.0
26	How many		0 0	-	•	chelles?		1.0	1.0	1.0
27	Sean Parnel			which U.	S. state?			0	0	0
20	How tall is							0	0	0
21	What is the							1.0	1.0	1.0
22	Who is the	~		-	f +1 - TT_: -1 -	1 9		1.0	1.0	1.0
49 46	Which other	_		_		_		$\frac{1.0}{0}$	$0.5 \\ 0$	0.67
$\frac{40}{45}$	Which profe Which coun					mes:		1.0	1.0	1.0
28	Give me all					lo.		1.0	1.0	1.0
43	Give me all		*			ıa.		1.0	1.0	1.0
41	Who founded		n inc deim	an onepi.	iera dog.			1.0	1.0	1.0
3	Who is the		f Berlin?					1.0	1.0	1.0
2	Who was the			F Kenne	edv?			1.0	0.5	0.67
4	How many					sterda	m have?	1.0	1.0	1.0
6	Give me all				•		11 110101	0	0	0
8	To which co						extend?	0	0	0
32	How often of					,		0	0	0
77	Who was ca			v				1.0	1.0	1.0
76	List the chil			hatcher.				1.0	1.0	1.0
75			-		the same p	lace the	ey were born in?	0	0	0
74	When did N				1		•	1.0	1.0	1.0
73	How many				lin have?			0	0	0
70	Is Michelle	Obama t	the wife of l	Barack O	bama?			1.0	1.0	1.0

100	Who produces Orangina?	0	0	0
94	What is the founding year of the brewery that produces Pilsner Urquell?	0	0	0
97	Who painted The Storm on the Sea of Galilee?	1.0	1.0	1.0
39	Give me all companies in Munich.	0.39	1.0	0.56
38	How many inhabitants does Maribor have?	1.0	1.0	1.0
58	What is the time zone of Salt Lake City?	1.0	1.0	1.0
98	Which country does the creator of Miffy come from?	1.0	1.0	1.0
55	Which Greek goddesses dwelt on Mount Olympus?	0	0	0
54	What are the nicknames of San Francisco?	1.0	1.0	1.0
30	What is the birth name of Angela Merkel?	1.0	1.0	1.0
35	Who developed Minecraft?	1.0	1.0	1.0
19	Give me all people that were born in Vienna and died in Berlin.	0	0	0
48	In which UK city are the headquarters of the MI6?	0	0	0

Scalewelis

Total 99	Processed 70	Right 32	Partially 1	Recall 0.33	Precision 0.33	F-measure 0.33					
ID	Question						R	Р	F		
56	When were	e the He	lls Angels fo	ounded?			1.0	1.0	1.0		
81	Which boo	0	0	0							
53	What is th	What is the ruling party in Lisbon?									
42	Who is the	e husban	d of Amano	la Palme	r?		1.0	1.0	1.0		
62	Did Socrat	1.0	1.0	1.0							
36	What is the	0	0	0							
60	Give me a	list of al	ll lakes in D	enmark.			0	0	0		
68	How many	employe	ees does Go	ogle have	e?		1.0	1.0	1.0		
88	Which film	ns starrin	ng Clint Eas	stwood di	id he direct	himself?	0	0	0		
63	Give me al	_					0	0	0		
64	How many	space n	nissions hav	e there b	een?		0	0	0		
65			did John I	_			0	0	0		
67		-	ts of the wi				0	0	0		
82			ll American				0	0	0		
69			bel prize in				1.0	1.0	1.0		
34						participate?	0	0	0		
87	-		e music for l				1.0	1.0	1.0		
84			omic Capta				0	0	0		
85			live in the c	-			1.0	1.0	1.0		
24			r of Queen				1.0	1.0	1.0		
26				-	n on the Sey	chelles?	0	0	0		
27			governor o	f which U	J.S. state?		1.0	1.0	1.0		
20	How tall is						0	0	0		
21			l of Canada				1.0	1.0	1.0		
22		-	or of Wyom	-	. 1	.1 0	1.0	1.0	1.0		
23				Villiam h	ave the sam	e mother?	1.0	1.0	1.0		
79	Was Dutch			.1	1.0		1.0	1.0	1.0		
44			the Weser fl		_		0	0	0		
45			e connected			1	0	0	0		
28					Ford Coppe		0	$0 \\ 0$	$0 \\ 0$		
29	ner.	1 actors s	starring in i	novies dii	rected by an	d starring William Sh	at- 0	U	U		
41	Who found	ded Intel	?				0	0	0		
3	Who is the	e mayor	of Berlin?				1.0	1.0	1.0		
2											
4	How many students does the Free University in Amsterdam have? 1.0 1.0 1.0										
7	When was Alberta admitted as province? 1.0 1.0 1.0										
14	Give me all members of Prodigy. 0 0 0										
9					at were ban	dleaders.	0	0	0		

8	To which countries does the Himalayan mountain system extend?	0	0	0
78	Was Margaret Thatcher a chemist?	1.0	1.0	1.0
49	Which other weapons did the designer of the Uzi develop?	0	0	0
83	How high is the Mount Everest?	1.0	1.0	1.0
6	Give me all professional skateboarders from Sweden.	0	0	0
76	List the children of Margaret Thatcher.	0	0	0
74	When did Michael Jackson die?	1.0	1.0	1.0
73	How many children did Benjamin Franklin have?	0	0	0
72	In which U.S. state is Fort Knox located?	1.0	1.0	1.0
71	When was the Statue of Liberty built?	0	0	0
70	Is Michelle Obama de vrouw van Barack Obama?	1.0	1.0	1.0
91	Which U.S. state has the abbreviation MN?	1.0	1.0	1.0
100	1	1.0	1.0	1.0
94	What is the founding year of the brewery that produces Pilsner Urquell?	1.0	1.0	1.0
97	Who painted The Storm on the Sea of Galilee?	1.0	1.0	1.0
58	v	1.0	1.0	1.0
39	1	0	0	0
38	v	0	0	0
59		0	0	0
48	v i	0.5	1.0	0.67
98	Which country does the creator of Miffy come from?	1.0	1.0	1.0
19	1 1	0	0	0
54	What are the nicknames of San Francisco?	0	0	0
57	1	0	0	0
30	8	1.0	1.0	1.0
50	↓ 0	1.0	1.0	1.0
35	Who developed Minecraft?	0	0	0
52	11	0	0	0
55	ÿ 1	0	0	0
89	· ·	1.0	1.0	1.0
32	How often did Nicole Kidman marry?	1.0	1.0	1.0

RTV

Total 99	Processed 55	Right 30	Partially 4	Recall 0.34	Precision 0.32	F-mea 0.3				
ID	Question							R	Р	F
56	When were	the Hell	s Angels for	unded?				0	0	0
42	Who is the	husband	of Amanda	a Palmer	?			1.0	1.0	1.0
29	Give me all ner.	actors st	arring in m	ovies dire	ected by and	starring	William Shat-	0	0	0
68	How many	employee	es does Goo	gle have?	?			1.0	1.0	1.0
88	Which films	starring	g Clint East	wood did	l he direct l	imself?		0	0	0
89	In which cit	-		_		ouried?		1.0	0.5	0.67
64	Give me all							0	0	0
65	Which instr			ennon pla	ay?			1.0	1.0	1.0
100	Who produ		_					1.0	1.0	1.0
83	How high is							1.0	1.0	1.0
81	Which book			-	d by Viking	Press?		1.0	0.01	0.03
86	What is the	_						1.0	1.0	1.0
53	What is the	- ·			0			0	0	0
84	Who create							1.0	1.0	1.0
24	Who was th		•			1 11 0		0	0	0
26	How many			e spoken	on the Seyo	chelles?		1.0	1.0	1.0
20	How tall is							1.0	1.0	1.0
21	What is the	-						1.0	1.0	1.0
22	Who is the	~		-	0			1.0	1.0	1.0
47	What is the	_	-					0	0	0
44	Which cities			_				1.0	1.0	1.0
45	Which coun					la.		1.0	1.0	1.0
28 43	Give me all					ıa.		$\frac{1.0}{1.0}$	1.0 1.0	1.0
43	Give me all Who founde			an snepi	iera dog.			0	0	1.0 0
3	Who is the							0	0	0
$\frac{3}{2}$	Who was the			F Konn	ody?			0	0	0
79	Was Dutch			r. Kemi	edy:			1.0	1.0	1.0
7	When was A			province	27			0	0	0
8	To which co			-		zstem ex	tend?	0	0	0
39	Give me all				inoantani s	, 500111 011		0	0	0
77	Who was ca	-		011.				1.0	1.0	1.0
76	List the chi			hatcher.				1.0	1.0	1.0
74	When did N		~					1.0	1.0	1.0
73	How many				lin have?			1.0	1.0	1.0
72	In which U.		•					1.0	1.0	1.0
71	When was t							1.0	1.0	1.0
70	Michelle Ob				bama?			1.0	1.0	1.0

93	Which movies did Kurosawa direct after Rashomon?	0	0	0
94	What is the founding year of the brewery that produces Pilsner Urquell?	0	0	0
97	Who painted The Storm on the Sea of Galilee?	1.0	1.0	1.0
13	Who is the youngest player in the Premier League?	0	0	0
38	How many inhabitants does Maribor have?	1.0	1.0	1.0
59	Which U.S. states are in the same timezone as Utah?	0	0	0
58	What is the time zone of Salt Lake City?	1.0	1.0	1.0
17	Give me all cars that are produced in Germany.	0.42	0.66	0.51
55	Which Greek goddesses dwelt on Mount Olympus?	0	0	0
54	What are the nicknames of San Francisco?	1.0	1.0	1.0
57	Give me the Apollo 14 astronauts.	1.0	1.0	1.0
30	What is the birth name of Angela Merkel?	1.0	1.0	1.0
37	Give me all sister cities of Brno.	0	0	0
62	Did Socrates influence Aristotle?	1.0	1.0	1.0
35	Who developed Minecraft?	0	0	0
33	Give me all Australian nonprofit organizations.	0	0	0
32	How often did Nicole Kidman marry?	1.0	1.0	1.0

Intui2

Total 99	Processed 99	Right 28	Partially 4	Recall 0.32	Precision 0.32	F-measure 0.32				
ID	Question							R	Р	F
24	Who was th		-					1.0	0.5	0.67
25	Which U.S.							0	0	0
26	How many			-		chelles?		0	0	0
27	Sean Parnel		-	which U.	S. state?			0	0	0
20	How tall is							0	0	0
21	What is the	-						1.0	1.0	1.0
22	Who is the	_		_	41	41 9		1.0	1.0	1.0
23	Do Prince I							0	0	0
28	Give me all						iama Chat	1.0	1.0	1.0
29		actors st	arring in inc	ovies dire	scred by and	starring Will	iam snat-	0.09	1.0	0.17
4	ner.	etudonte	door the Fr	roo Univo	reity in Am	sterdam have	.?	0	0	0
8						sterdam nave zstem extend		0	0	0
59	Which U.S.						•	0	0	0
58	What is the							1.0	1.0	1.0
55	Which Gree							0	0	0
54	What are th	_						1.0	1.0	1.0
57	Give me the							0	0	0
56	When were	-						1.0	1.0	1.0
51	Give me all		-		o the Nethe	erlands.		0	0	0
50						of Pigs Invasion	on?	0	0	0
53	What is the					-		1.0	1.0	1.0
52	Who invent	ed the zi	ipper?					1.0	1.0	1.0
88	Which films	starring	g Clint East	wood did	l he direct h	imself?		0	0	0
89	In which cit	y was th	ne former D	utch que	en Juliana b	uried?		0	0	0
82	Give me a l				S.			0	0	0
83	How high is							0	0	0
80			*			than 300 page	es.	0	0	0
81	Which book			-	d by Viking	Press?		0	0	0
86	What is the							1.0	1.0	1.0
87	Who compo							1.0	1.0	1.0
84	Who create							1.0	1.0	1.0
85	How many			pital of A	Australia?			1.0	1.0	1.0
3	Who is the		1.0	1.0	1.0					
7	When was A		0	0	0					
100	Who produc		~	1				1.0	1.0	1.0
39	Give me all		0	0	0					
38	How many							1.0	1.0	1.0
33	Give me all	Austral	ian nonprofi	ıı organız	tations.			0	0	0

32	How often did Nicole Kidman marry?	0	0	0
31	Give me all current Methodist national leaders.	0	0	0
30	What is the birth name of Angela Merkel?	1.0	1.0	1.0
37	Give me all sister cities of Brno.	1.0	1.0	1.0
36	What is the melting point of copper?	1.0	1.0	1.0
35	Who developed Minecraft?	1.0	1.0	1.0
34	In which military conflicts did Lawrence of Arabia participate?	0	0	0
60	Give me a list of all lakes in Denmark.	0	0	0
61	How many space missions have there been?	0	0	0
62	Did Socrates influence Aristotle?	0	0	0
63	Give me all Argentine films.	0	0	0
64	Give me all launch pads operated by NASA.	0	0	0
65	Which instruments did John Lennon play?	1.0	1.0	1.0
66	Which ships were called after Benjamin Franklin?	0	0	0
67	Who are the parents of the wife of Juan Carlos I?	0	0	0
68	How many employees does Google have?	1.0	1.0	1.0
69	Did Tesla win a nobel prize in physics?	0	0	0
2	Who was the successor of John F. Kennedy?	1.0	1.0	1.0
6	Give me all professional skateboarders from Sweden.	0	0	0
99	For which label did Elvis record his first album?	0	0	0
98	Which country does the creator of Miffy come from?	0	0	0
91	Which U.S. state has the abbreviation MN?	0	0	0
90	Where is the residence of the prime minister of Spain?	0	0	0
93	Which movies did Kurosawa direct after Rashomon?	0	0	0
93 92		0	0	0
95	Show me all songs from Bruce Springsteen released between 1980 and 1990. Who wrote the lyrics for the Polish national anthem?	1.0	1.0	1.0
94		1.0	1.0	
94 97	What is the founding year of the brewery that produces Pilsner Urquell? Who pointed The Storm on the Sec of Coliber?		0	1.0
96	Who painted The Storm on the Sea of Galilee? Give me all B-sides of the Ramones.	$0 \\ 0$	0	0
90 11	Who is the Formula 1 race driver with the most races?	0	0	$0 \\ 0$
10	What is the total amount of men and women serving in the FDNY?	0	0	0
13	· · · · · · · · · · · · · · · · · · ·	0	0	0
13 12	Who is the youngest player in the Premier League? Give me all world heritage sites designated within the past five years.	0	0	0
$\frac{12}{15}$	What is the longest river?	0	0	0
14	Give me all members of Prodigy.	0	0	0
17	Give me all cars that are produced in Germany.	0	0	
16	Does the new Battlestar Galactica series have more episodes than the old	0	0	0
10	one?	U	U	0
19		0	0	0
48	Give me all people that were born in Vienna and died in Berlin. In which UK city are the headquarters of the MI6?	1.0	0.67	-
	v -			0.8
49 46	Which other weapons did the designer of the Uzi develop? Which professional surfers were born on the Philippines?	$0 \\ 0$	0	$0 \\ 0$
$40 \\ 47$		1.0	1.0	
44	What is the average temperature on Hawaii? Which cities does the Weser flow through?	0	0	1.0
$\frac{44}{45}$	Which countries are connected by the Rhine?	0	0	0
42	Who is the husband of Amanda Palmer?	-		
42	who is the husband of Amanda Famer!	1.0	1.0	1.0

43	Give me all breeds of the German Shepherd dog.	1.0	1.0	1.0
40	List all games by GMT.	0	0	0
41	Who founded Intel?	1.0	1.0	1.0
1	Which German cities have more than 250000 inhabitants?	0	0	0
5	What is the second highest mountain on Earth?	0	0	0
9	Give me a list of all trumpet players that were bandleaders.	0	0	0
77	Who was called Scarface?	1.0	1.0	1.0
76	List the children of Margaret Thatcher.	1.0	1.0	1.0
75	Which daughters of British earls died in the same place they were born in?	0	0	0
74	When did Michael Jackson die?	0	0	0
73	How many children did Benjamin Franklin have?	0	0	0
72	In which U.S. state is Fort Knox located?	0	0	0
71	When was the Statue of Liberty built?	0	0	0
70	Is Michelle Obama the wife of Barack Obama?	0	0	0
79	Was Dutch Schultz a jew?	0	0	0
78	Was Margaret Thatcher a chemist?	0	0	0

\mathbf{SWIP}

DBpedia

Total	Processed	Right	Partially	Recall	Precision	F-measure				
99	21	15	2	0.16	0.17	0.17				
ID	Question						R	Р	F	
39	Give me all	0.76	1.0	0.87						
38	How many	1.0	1.0	1.0						
20	How tall is Michael Jordan?							1.0	1.0	
21	What is the capital of Canada?							1.0	1.0	
22	Who is the governor of Wyoming?							1.0	1.0	
19	Give me all people that were born in Vienna and died in Berlin.							1.0	1.0	
54	What are the nicknames of San Francisco?							0	0	
30	What is the birth name of Angela Merkel?							1.0	1.0	
37	Give me all	0	0	0						
3	Who is the	0	0	0						
42	Who is the	husband	l of Amanda	a Palmer	?		0	0	0	
28	Give me all movies directed by Francis Ford Coppola.							1.0	1.0	
88	Which films starring Clint Eastwood did he direct himself?							1.0	1.0	
63	Give me all Argentine films.							1.0	0.22	
65	Which instruments did John Lennon play?							1.0	1.0	
70	Is Michelle Obama the wife of Barack Obama?							1.0	1.0	
68	How many	1.0	1.0	1.0						
45	Which cour	1.0	1.0	1.0						
86	What is the	1.0	1.0	1.0						
84	Who create	d the co	mic Captair	n Americ	a?		1.0	1.0	1.0	
85	5 How many people live in the capital of Australia? 1.0 1.0 1.0									

SWIP

MusicBrainz

WIUSIC	Drainz								
Total 50	Processed 33	Right 24	Partially 2	Recall 0.51	Precision 0.51	F-measure 0.51			
ID	Question						\mathbf{R}	Р	F
42	How many live albums by Elvis Presley are there?							1.0	1.0
24	Which compilations contain the song Last Christmas?							1.0	1.0
25	How long is the song This Magic Moment by Lou Reed?							1.0	1.0
26	Give me all singles by Donovan.							1.0	1.0
21	How many singles did Brian Eno record?							1.0	1.0
48	Give me all soundtracks composed by the Pet Shop Boys.							1.0	0.67
46	Give me the titles of all singles by Phil Collins.							0	0
28	By whom is the song Everlong?							1.0	1.0
41					is in their ti	tle?	1.0	0.42	0.6
1	Which grou						1.0	1.0	1.0
2	Who produ						1.0	1.0	1.0
5	How many				_		1.0	1.0	1.0
6	Who compo					3.5	1.0	1.0	1.0
9		_			rk Side of tl	ne Moon?	1.0	1.0	1.0
8	Is Bugs a tr			00			1.0	1.0	1.0
13					y Lionel Rio	chie?	1.0	1.0	1.0
14	How many					.1	1.0	1.0	1.0
11					ainst All Au		0	0	0
39	tion?	0 00				Greatest Hits com	pila- 0	0	0
38	On which albums does the song Because You Loved Me appear?								1.0
15	Who compo				?		0	$0 \\ 1.0$	0
22	How often did Madonna marry?								1.0
17	By whom is the single Pure Morning?								1.0
16	Which bands broke up in 2000?								1.0
33	When were	1.0	1.0	1.0					
18	Who produ	? 1.0 1.0	1.0 1.0	1.0					
31	When did Ludwig van Beethoven die?								1.0
30	Who was Whitney Houston's husband? Did Kylie Minogue ever collaborate with Mariah Carey?								1.0
51		0	0	0					
35	How many	1.0	1.0	1.0					
34	When was '						1.0	1.0	1.0
19	With whom						0	0	0
32	How many	pieces of	work did N	10zart cr	eate:		0	0	0