

# PROJET BDW

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### QUESTION 3 :

Voici les DFs “plausibles”:

- $\text{subject} \rightarrow \text{age, gender, smoker, origin, hunger}$
- $\text{CID} \rightarrow \text{odorants, Chemical Family, dilution}$
- $\text{age} \rightarrow \text{subject}$
- $\text{odorants} \rightarrow \text{CID}$
- $\text{subject, block} \rightarrow \text{fatigue}$
- $\text{order\_in\_block, block} \rightarrow \text{odorants}$

Le résultat de la requête « ***select distinct subject, age, gender, smoker, hunger from "olfaction-csv";*** » ne retourne qu’une seule fois chaque numéro de sujet donc la DF est vraie. Donc “**subject  $\rightarrow$  age, gender, smoker, origin, hunger**” est vraie.

De même, les DFs “**age  $\rightarrow$  subject**”, “**CID  $\rightarrow$  Odorants, Chemical Family, Dilution**”, “**Subject,Block $\rightarrow$ Fatigue**” , “**order\_in\_block, block  $\rightarrow$  odorants**” sont vraies aussi.

**Subject, CID  $\rightarrow$  R** ((**Subject, CID**) semblent être clef.

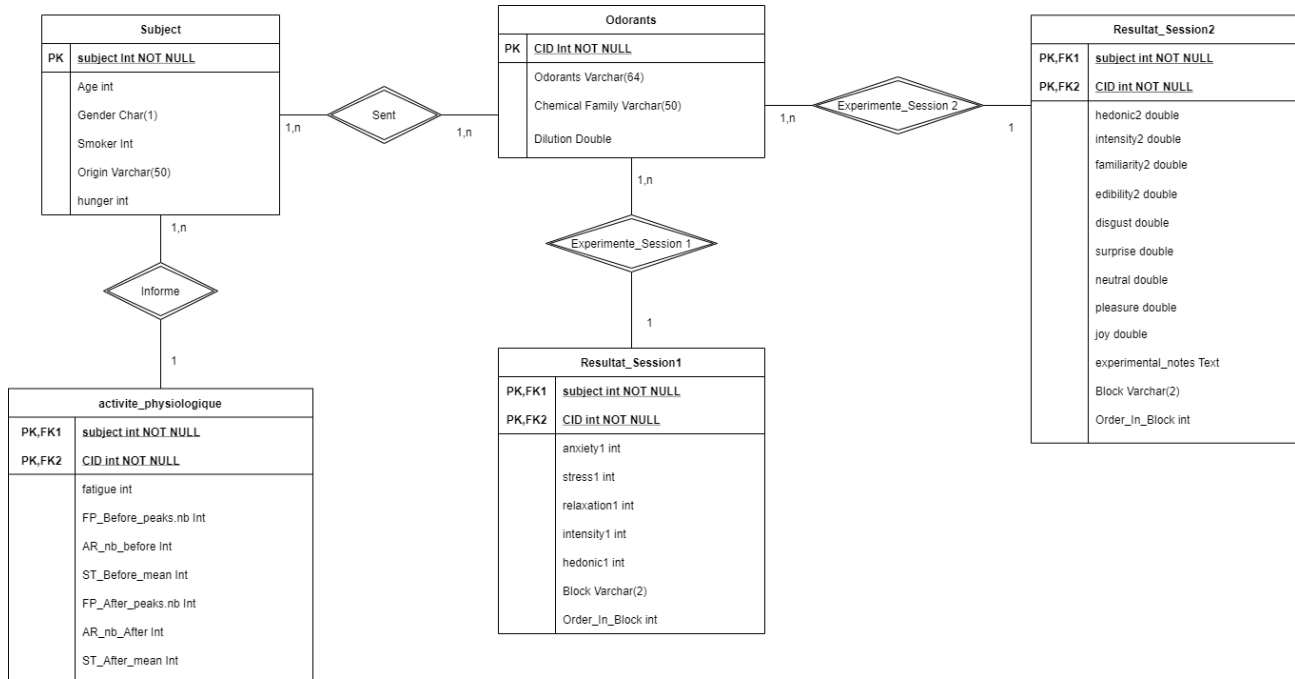
### QUESTION 4 :

Voici les DI “plausibles” :

- $\text{activite\_physiologique}[\text{subject}] \subseteq \text{Subject}[\text{subject}]$
- $\text{activite\_physiologique}[\text{CID}] \subseteq \text{Odorants}[\text{CID}]$
- $\text{Resultat\_Session1}[\text{subject}] \subseteq \text{Subject}[\text{subject}]$
- $\text{Resultat\_Session1}[\text{CID}] \subseteq \text{Odorants}[\text{CID}]$
- $\text{Resultat\_Session2}[\text{subject}] \subseteq \text{Subject}[\text{subject}]$
- $\text{Resultat\_Session2}[\text{CID}] \subseteq \text{Odorants}[\text{CID}]$

## QUESTION 5 :

### SCHEMA ENTITE-ASSOCIATION :



### MODELE RELATIONNELLE :

Subject (**subject**, age, gender, smoker, origin, hunger)

Odorants (**CID**, Odorants, "chemical family", Dilution)

activite\_physiologique (**subject**, **CID**, FP\_Before\_peaks.nb, AR\_nb\_before, ST\_Before\_mean, FP\_After\_peaks.nb, AR\_nb\_After, ST\_After\_mean, fatigue)

Resultat\_Session1 (**subject**, **CID**, hedonic1, intensity1, relaxation1, stress1, anxiety1, block, Order\_in\_Block)

Resultat\_Session2 (**subject**, **CID**, hedonic2, intensity2, familiarity2, edibility2, disgust, surprise, neutral, pleasure, joy, block, Order\_in\_Block)

Table : Subject											
Subject	▼	Age	▼	Gender	▼	Smoker	▼	Origin	▼	Hunger	▼
1		28		m		0		France		2	
2		26		f		0		France		3	
3		21		m		1		France		3	
4		19		m		0		France		4	
5		44		m		1		France		6	
6		19		f		0		France		2	
7		21		f		0		France		3	
8		41		f		0		France		2	
9		23		m		0		France		2	
10		20		m		0		France		8	
11		25		f		0		coreene		7	
12		27		f		0		portuguese		1	
13		33		f		0		France		1	
14		21		m		0		France		4	
15		37		m		0		France		2	
16		37		f		1		France		1	
17		46		m		0		France		1	
18		44		f		1		France		10	
19		46		m		1		France		3	
20		45		m		0		France		2	

Table : Odorants			
CID	Odorants	Chemical Family	Dilution
109	MineralOil(NoOdor)		
112	MineralOil(NoOdor)		
113	MineralOil(NoOdor)		
176	acid acetic	acide carboxylique	0.01
240	benzaldehyde	aldehyde aromatique	2
264	butanoic acid	acide carboxylique	0.11
650	2,3-butanedione	ketone	2.98e-05
798	indole	benzene aromatique bicyclique	2
998	phenylacetaldehyde	aldehyde aromatique	0.58
1032	propanoic acid	acide carboxylique	0.04
1049	pyridine	benzene aromatique bicyclique	0.01
1068	dimethylsulphide	thioether	1,00E-06
1133	thioglycolic acid	acide carboxylique, thiol	1.55
2758	cineole	monoterpene bicyclique	1
2879	4-methylphenol (p-cresol)	phenol	0.5
2969	decanoic acid	acide gras sature	11.4
3314	eugenol	phenol, phenyl propene	13.45
6054	2-phenylethanol	alcool	2.66
6184	hexanal	aldehyde	0.1
6549	linalool	monoterpene acyclique	2.17
6989	thymol	monoterpene monocyclique	18.6
7284	2-methyl-butanal	aldehyde	4.2e-06
7342	ethyl-2-methyl-propanoate	esther carboxylique	0.05
7410	acetophenone	ketone aromatique	0.57
7462	alpha-terpinene	monoterpene monocyclique	1.5
7590	ethyl phenyl acetate	esther aromatique	5.11
7600	iso amyl phenyl acetate	esther aromatique	80.6
7654	phenylethyl acetate	esther aromatique	5.48
7762	ethyl butanoate	esther carboxylique	0.05
7770	propyl butyrate	esther carboxylique	0.05
7794	citronellal	monoterpene aldehyde	1.43
7799	ethyl octanoate	esther carboxylique	1.71
7803	propyl propionate	esther carboxylique	0.05
7983	butyl butyrate	esther carboxylique	0.18
7997	propyl acetate	esther carboxylique	0.2
8051	2-heptanone	ketone	0.07
8063	pentanal	aldehyde	0.01

(Beaucoup trop de tuple pour tous les affichés)

Table : Resultat_Session1								
Subject	CID	Anxiety1	Stress1	Relaxation1	Intensity1	hedonic1	Block	Order_In_Block
1	109	3	3	2	2	5	a	11
1	112	2	3	2	2	4	b	18
1	113	0	0	0	0	0	c	10
1	176	2	4	2	6	3	a	2
1	240	2	2	5	7	6	c	18
1	264	4	2	2	7	3	c	21
1	650	2	2	3	5	6	b	21
1	798	2	2	2	6	4	c	17
1	998	2	2	3	6	5	a	14
1	1032	2	2	5	5	6	a	17
1	1049	3	3	3	3	4	b	26
1	1068	2	2	2	2	5	c	9
1	1133	5	4	2	7	2	b	28
1	2758	2	3	2	6	5	a	19
1	2879	2	2	4	5	6	b	14
1	2969	3	6	2	4	4	a	3
1	3314	3	3	2	7	4	c	24
1	6054	2	2	6	4	6	a	9
1	6184	3	3	5	5	5	b	19
1	6549	2	2	7	6	7	a	15
1	6989	2	2	5	7	6	c	15
1	7284	4	5	2	3	3	a	23
1	7342	2	2	2	4	5	c	19
1	7410	2	2	6	6	7	b	17
1	7462	2	2	3	2	5	a	1
1	7590	3	4	3	6	5	b	15
1	7600	3	4	3	6	3	b	2
1	7654	2	2	4	5	6	c	11
1	7762	2	2	4	5	6	a	18
1	7770	3	4	3	2	3	b	1
1	7794	2	2	3	7	6	a	12
1	7799	2	2	2	3	5	a	25
1	7803	2	2	2	3	5	c	1
1	7983	4	5	2	3	4	a	4
1	7997	3	3	3	6	5	b	11
1	8051	2	2	2	4	5	b	22
1	8063	2	2	2	7	5	c	4

(Beaucoup trop de tuple pour tous les affichés)

Table : Resultat_Session2													
Subject	CID	familiarity2	edibility2	Intensity2	hedonic2	disgust	surprise	neutral	pleasure	joy	Block	Order_in_Block	experimental_notes
1	109	0.170740286	0.150234638	0.184302562	0.176306743	0.0	0.0	0.923216299	0.0	0.0	a	11	
1	112	0.374466301492708	0.187549147787228	0.202893118045613	0.39022490205944	0.0	0.0	0.914537673827881	0.0	0.0	b	18	
1	113	0.273047617692709	0.199046236346688	0.360452998211276	0.23397669260289	0.0	0.0	0.927905205045288	0.0	0.0	c	10	
1	176	0.149541901	0.208682239	0.247785871	0.345754242	0.0	0.0	0.932898797	0.0	0.0	a	2	
1	240	0.687864103743041	0.458294545299201	0.741804950908293	0.686652771701499	0.0	0.0	0.0	0.598200225366593	0.3691607406727	c	18	
1	264	0.409845328221888	0.234041229392442	0.891999529551901	0.30311043265056	0.0	0.0	0.934205949742048	0.0	0.0	c	21	
1	650	0.627433095975755	0.3525873271309	0.864107443788831	0.368541450357242	0.0	0.859456414151481	0.0	0.0	0.0	b	21	
1	798	0.638885353654449	0.177492463725706	0.773047362000206	0.352873218153661	0.3585948699996976	0.0	0.390242473510845	0.0	0.0	c	17	
1	998	0.465384186	0.204830719	0.737285497	0.483224229	0.0	0.0	0.0	0.0	0.322624738	a	14	
1	1032	0.247938174	0.166428826	0.602377059	0.151261779	0.35296271	0.0	0.0	0.0	0.0	a	17	
1	1049	0.275131066648686	0.186902778199091	0.338883315073454	0.311549464280926	0.363848775230056	0.0	0.0	0.0	0.0	b	26	
1	1068	0.81242089201854	0.737929492156369	0.815099419443169	0.642789843974068	0.0	0.0	0.0	0.0	0.432716704486661	c	9	
1	1133	0.528085312346715	0.0987098329144467	0.968334998818618	0.104970506436746	0.952237111073409	0.924416131800709	0.0	0.0	0.0	b	28	
1	2758	0.713803735	0.170519494	0.731682255	0.688594964	0.0	0.0	0.0	0.281693461	0.222980663	a	19	
1	2879	0.478418900508687	0.165874759252258	0.8710331529824	0.465273604093053	0.402529312896351	0.0	0.0	0.0	0.0	b	14	
1	2969	0.221695298	0.223092035	0.247785871	0.166011039	0.0	0.0	0.917197291	0.0	0.0	a	3	
1	3314	0.717618181549724	0.16971658258858	0.752073474400512	0.670604976046643	0.0	0.0	0.0	0.0	0.541803090612123	c	24	
1	6054	0.622546482	0.142993101	0.508616442	0.603499539	0.0	0.0	0.956051648	0.0	0.0	a	9	
1	6184	0.699729720067959	0.739319082193593	0.808249922955876	0.729517530201642	0.0	0.0	0.935098967988254	0.0	0.0	b	19	
1	6549	0.744593043	0.191155392	0.780875036	0.695298811	0.0	0.0	0.0	0.0	0.507128409	a	15	
1	6989	0.495676955914331	0.491250393457056	0.788208127150235	0.500737194291728	0.0	0.0	0.0	0.516963109155463	0.496169315411409	c	15	
1	7284	0.17315353	0.18584236	0.743045345	0.190075225	0.716824385	0.0	0.0	0.0	0.0	a	23	
1	7342	0.647886239307493	0.153825482383787	0.710824817325434	0.630094624553058	0.0	0.0	0.0	0.0	0.366374309529173	c	19	
1	7410	0.736522911461151	0.14299310102669	0.792564518449773	0.733247299642101	0.0	0.0	0.0	0.0	0.268880437605226	b	17	
1	7462	0.241653841	0.171671351	0.654659175	0.634657958	0.0	0.0	0.0	0.353070771	0.0	a	1	
1	7590	0.295973964456711	0.156754894703307	0.650548824841301	0.499475697349178	0.0	0.0	0.913602578190364	0.0	0.0	b	15	
1	7600	0.209124356658086	0.198019291143881	0.359136526666901	0.261491299165008	0.0	0.0	0.904788115327531	0.0	0.0	b	2	
1	7654	0.496442118934541	0.512766856734501	0.788470574854402	0.48236051290061	0.0	0.0	0.869275564752975	0.0	0.0	c	11	
1	7762	0.488038485	0.514462884	0.595911347	0.501841538	0.0	0.0	0.0	0.263640058	0.0	a	18	
1	7770	0.16540468812786	0.212820832703363	0.3691607406727	0.270240084063846	0.0	0.0	0.925771756991481	0.0	0.0	b	1	
1	7794	0.504557277	0.096378875	0.803353488	0.694974633	0.0	0.0	0.978722908	0.0	0.0	a	12	
1	7799	0.231084005	0.160105354	0.655615744	0.324079067	0.399974465	0.0	0.0	0.0	0.0	a	25	
1	7803	0.286799857351673	0.256266204667942	0.356853056457807	0.295367941266902	0.0	0.0	0.905504911653172	0.0	0.0	c	1	
1	7983	0.194366413	0.226465622	0.245035555	0.403053411	0.0	0.0	0.885438613	0.0	0.0	a	4	
1	7997	0.26067998246149	0.173124466004252	0.515631118017215	0.525716934939905	0.0	0.0	0.803159882694439	0.0	0.286483449598987	b	11	
1	8051	0.67003930830128	0.21063530849206	0.866674329791945	0.507664618042667	0.0	0.86487840352297	0.0	0.0	0.0	b	22	
1	8063	0.37990090762212	0.18584235964899	0.780875035894698	0.307146144111341	0.507416006120098	0.363325691806527	0.0	0.0	0.0	c	4	

(Beaucoup trop de tuple pour tous les affichés)

Table : Activite_Physiologique									
Subject	CID	Fatigue	FP_before_peaks	AR_nb_Before	ST_Before_mean	FP_after_peaks	AR_nb_after	ST_after_mean	
1	109	6	12.0	2.0	32.130478	37.0	5.0	32.089703	
1	112	5	13.0	2.0	32.986362	38.0	4.0	32.986282	
1	113	7	12.0	1.0	30.07672	36.0	3.0	30.048817	
1	176	6	13.0	1.0	31.087934	34.0	2.0	31.055216	
1	240	7	12.0	3.0	29.811867	35.0	7.0	29.78568	
1	264	7	11.0	2.0	29.806952	35.0	6.0	29.871887	
1	650	5	12.0	2.0	32.905846	39.0	3.0	32.75797	
1	798	7	12.0	2.0	29.75802	37.0	6.0	29.852762	
1	998	6	11.0	2.0	31.794004	37.0	5.0	31.781397	
1	1032	6	13.0	1.0	31.204477	34.0	4.0	31.05699	
1	1049	5	13.0	2.0	33.202736	39.0	3.0	33.197624	
1	1068	7	13.0	2.0	30.141556	34.0	4.0	30.076294	
1	1133	5	13.0	2.0	33.051826	39.0	6.0	33.00215	
1	2758	6	12.0	2.0	31.54406	36.0	4.0	31.617495	
1	2879	5	13.0	2.0	32.74021	37.0	3.0	32.807343	
1	2969	6	12.0	1.0	31.382092	35.0	4.0	31.43428	
1	3314	7	11.0	2.0	29.724745	34.0	3.0	29.630798	
1	6054	6	16.0	1.0	31.97671	37.0	3.0	31.927732	
1	6184	5	12.0	3.0	32.935215	40.0	4.0	32.945454	
1	6549	6	12.0	2.0	31.741184	36.0	3.0	31.615452	
1	6989	7	12.0	2.0	29.302109	33.0	2.0	29.330994	
1	7284	6	12.0	2.0	31.401546	36.0	4.0	31.436062	
1	7342	7	11.0	2.0	29.905058	35.0	4.0	29.879225	
1	7410	5	13.0	2.0	33.103775	39.0	3.0	33.014877	
1	7462	6	12.0	3.0	31.210852	35.0	4.0	31.098171	
1	7590	5	13.0	2.0	33.062473	37.0	2.0	33.059406	
1	7600	5	12.0	1.0	32.387745	38.0	2.0	32.297882	
1	7654	7	11.0	2.0	30.009338	36.0	5.0	29.878056	
1	7762	6	11.0	2.0	30.893877	35.0	3.0	30.995394	
1	7770	5	14.0	2.0	32.63525	43.0	2.0	32.587627	
1	7794	6	11.0	2.0	31.810505	35.0	3.0	31.6674	
1	7799	6	14.0	2.0	31.227291	35.0	4.0	31.097485	
1	7803	7	12.0	2.0	29.02346	33.0	3.0	28.958097	
1	7983	6	12.0	1.0	31.853886	32.0	3.0	31.851767	
1	7997	5	13.0	2.0	32.923233	41.0	4.0	32.983177	
1	8051	5	13.0	2.0	32.88592	41.0	2.0	32.95133	
1	8063	7	11.0	2.0	30.145473	36.0	3.0	30.168873	

(Beaucoup trop de tuple pour tous les affichés)



FORME NORMAL :

Ici la modélisation est en FNBC.