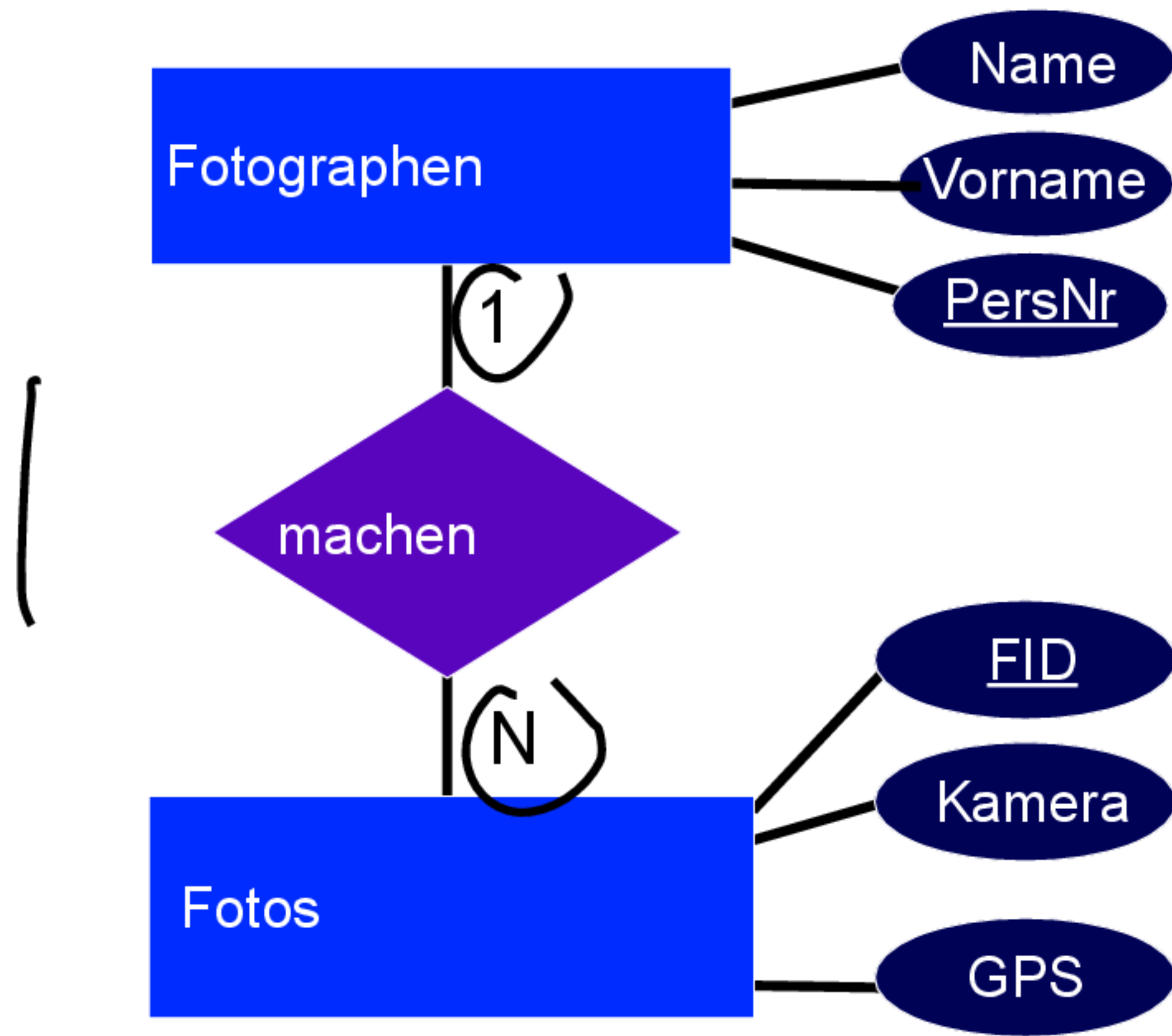


# 1:N Vereinfachen

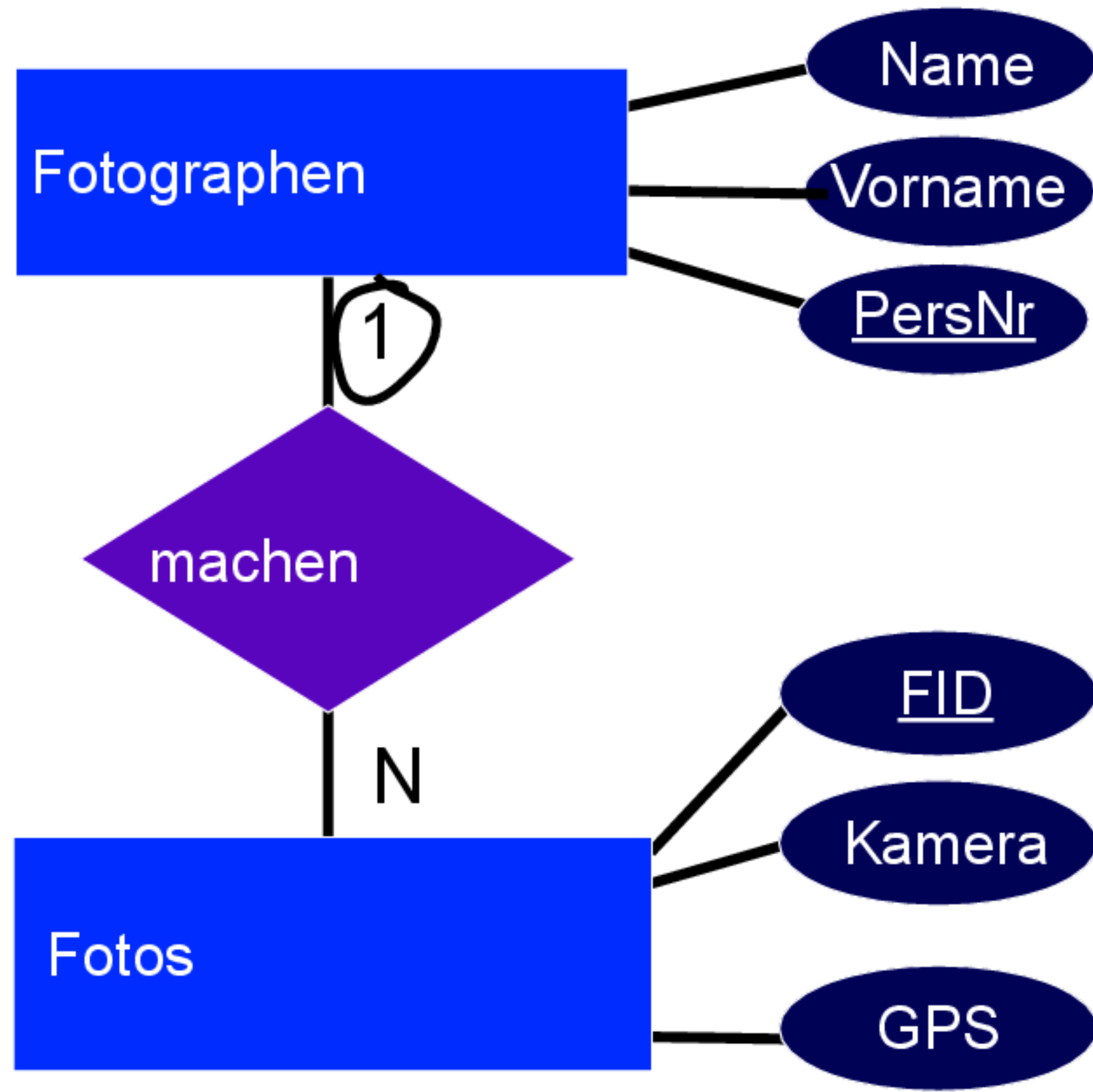


[Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}

[machen] : {[ PersNr: int, FID: int ]}

[Fotos] : {[ FID: int, Kamera: string, GPS: point ]}

# 1:N Vereinfacht

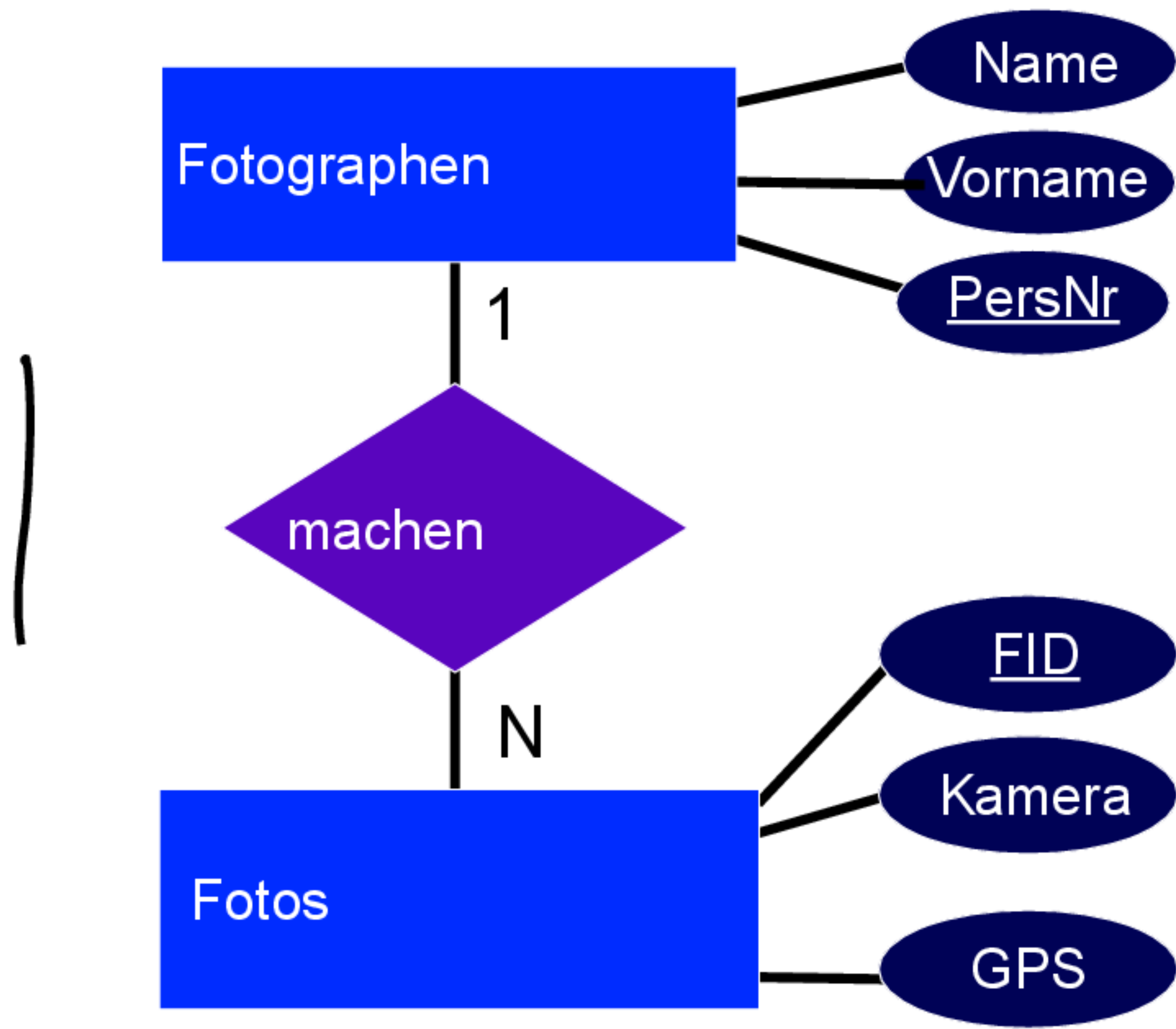


[Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}

[Fotos] : {[ FID: int, Kamera: string, GPS: point, gemachtVon: int ]}

→ Fremdschlüssel

# 1:N Vereinfacht



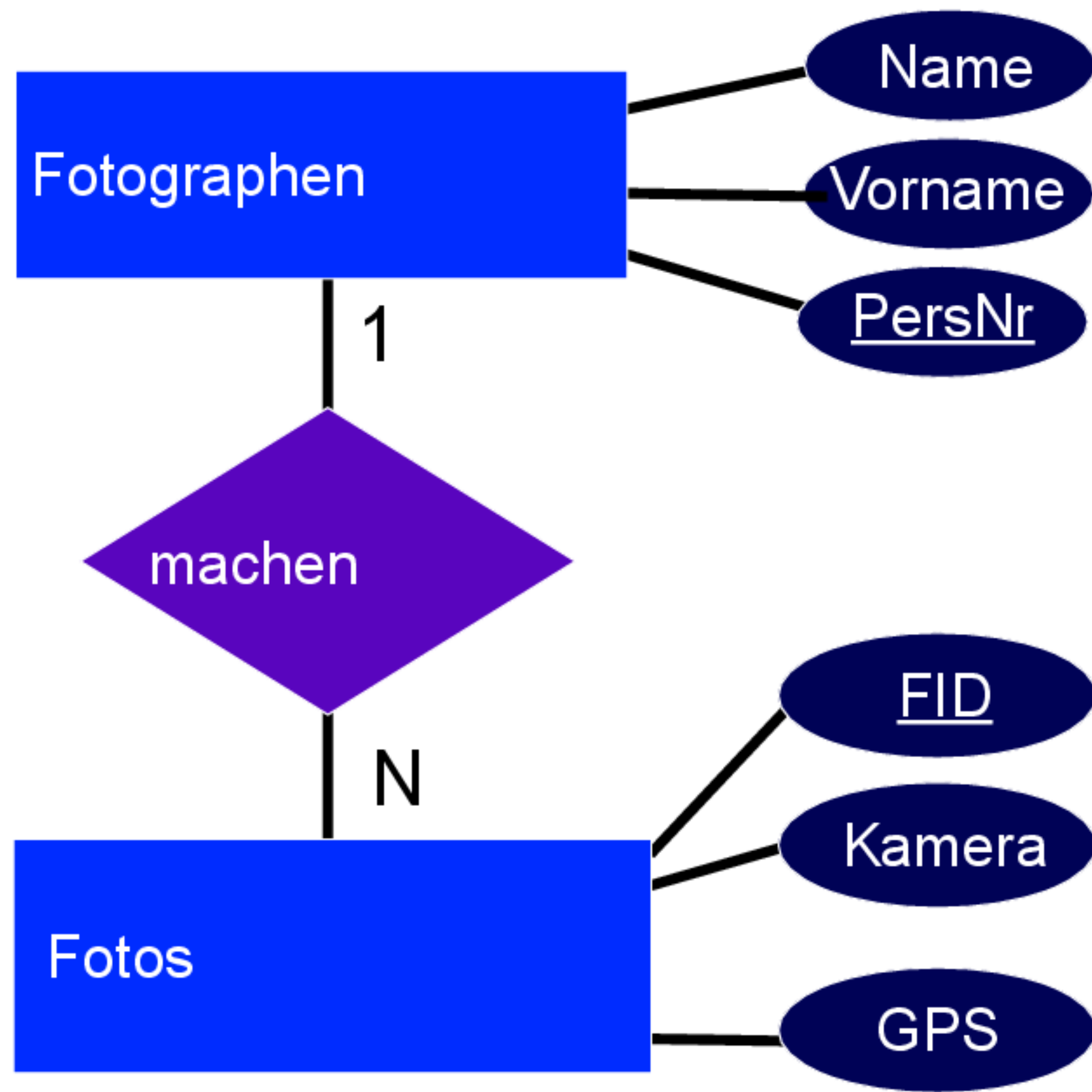
Fotos			
<u>FID</u>	Kamera	GPS	gemachtVon
13	Canon	(49°15'24.04"N, 7°2'45.48"E)	11
7	Canon	(49°14'20.14"N, 7°2'44.48"E)	11
43	Nikon	(49°15'24.04"N, 7°2'44.49"E)	11
22	Sony	(49°15'22.11"N, 7°2'43.52"E)	42
4	Sony	(49°15'25.33"N, 7°2'45.38"E)	42
...	...	...	...

[Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}

[Fotos] : {[ FID: int, Kamera: string, GPS: point, **gemachtVon: int** ]}

↙ Fremdschlüssel

# 1:N **FALSCH** Vereinfachen

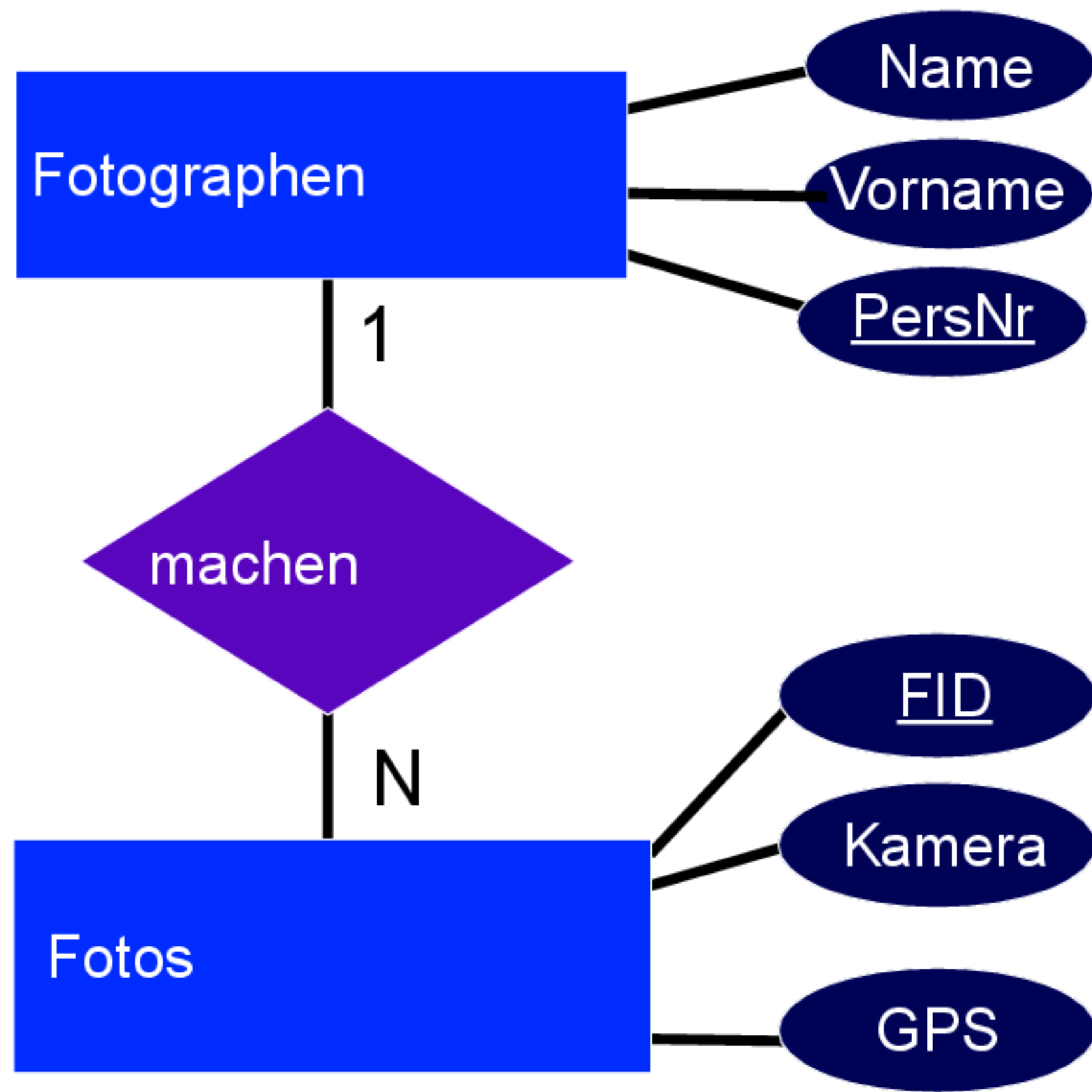


[Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}

[machen] : {[ PersNr: int, FID: int ]}

[Fotos] : {[ FID: int, Kamera: string, GPS: point ]}

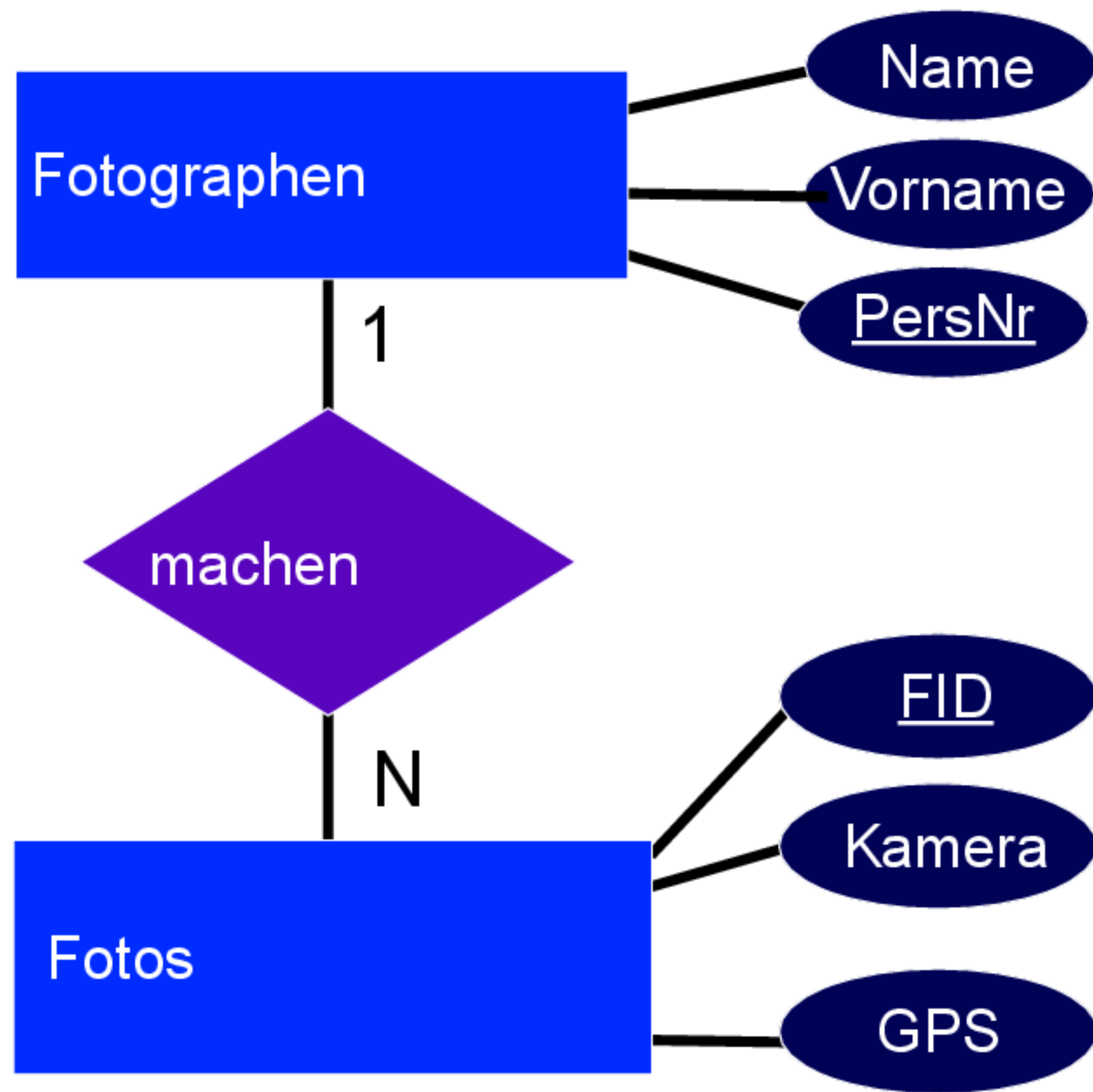
# 1:N **FALSCH** Vereinfacht



→ [Fotographen] : {[ Name: string, Vorname: string, PersNr: int, machtFoto: int ]}

[Fotos] : {[ FID: int, Kamera: string, GPS: point ]}

# 1:N **FALSCH** Vereinfacht

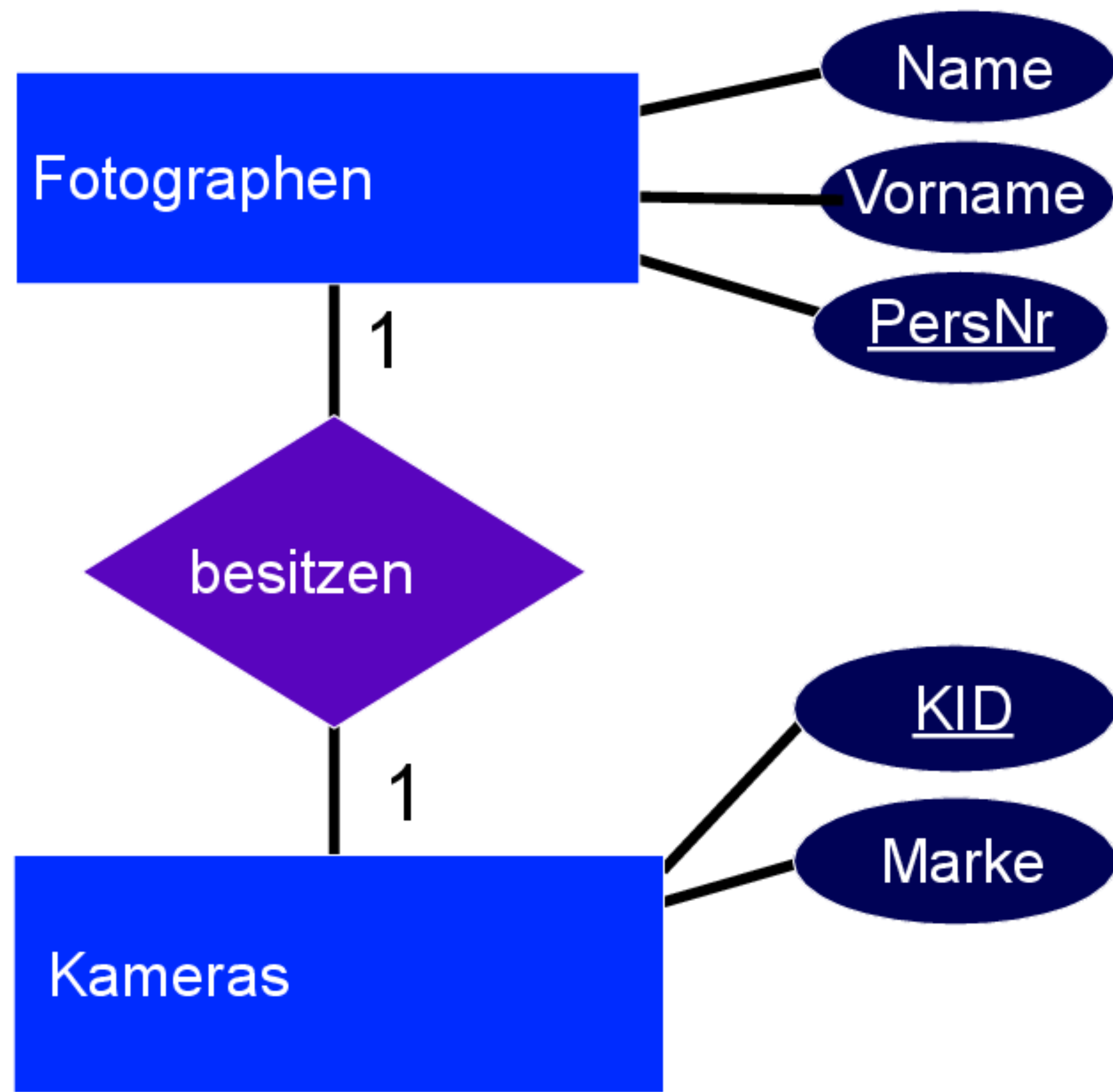


Fotographen			
Name	Vorname	<u>PersNr</u>	<u>machtFoto</u>
Schmidt	Albert	42	11
Schmidt	Albert	42	4
Schmidt	Albert	42	9
Capa	Rob	12	32
Capa	Rob	12	77
...	...	...	...

[Fotographen] : {[ Name: string, Vorname: string, PersNr: int, machtFoto: int ]}

[Fotos] : {[ FID: int, Kamera: string, GPS: point ]}

# 1:1 Vereinfachen, Option 1

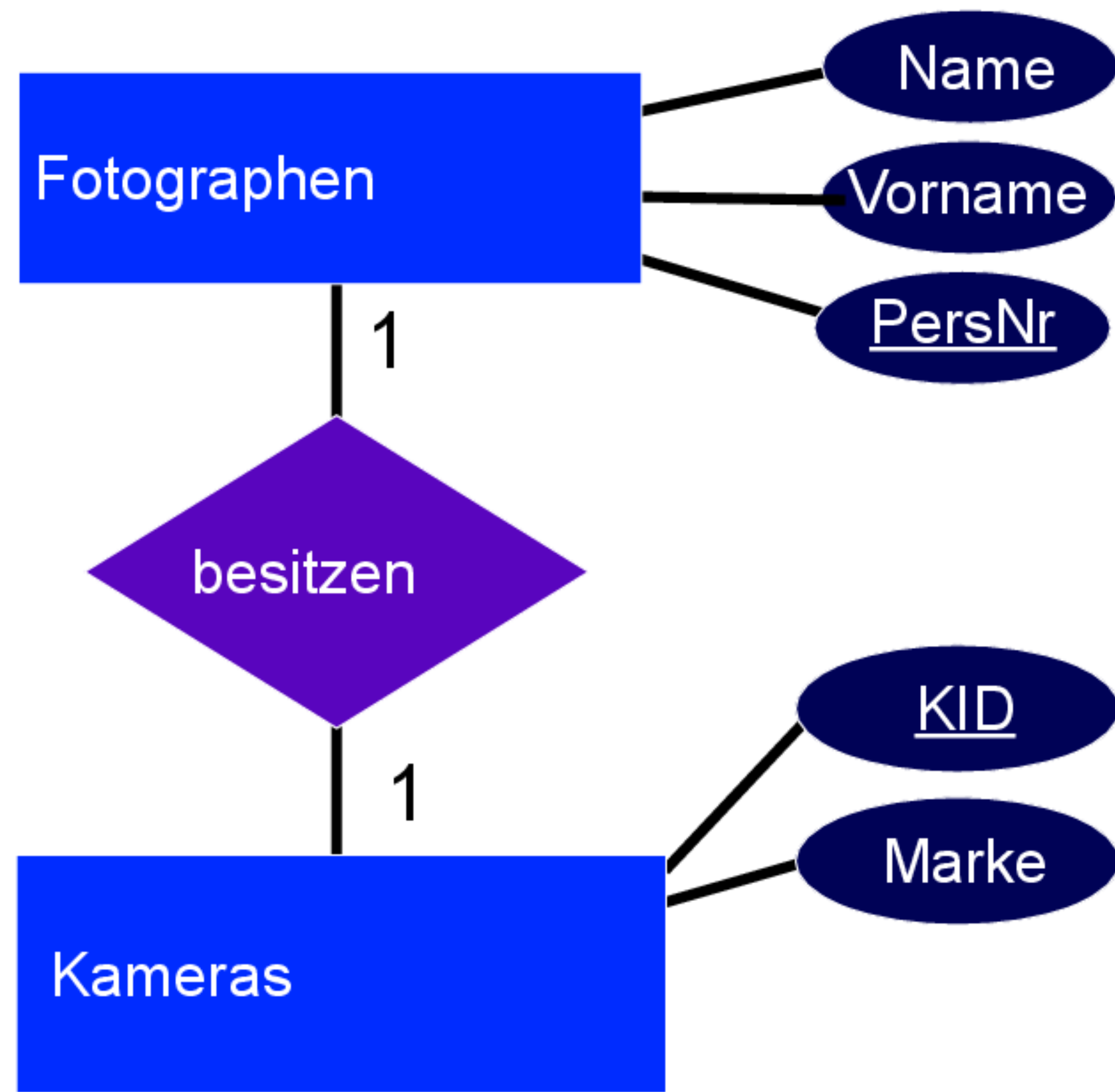


[Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}

➔ [besitzen] : {[ PersNr: int, KID: int ]}

[Kameras] : {[ KID: int, Marke: string ]}

# 1:1 Vereinfacht, Option 1



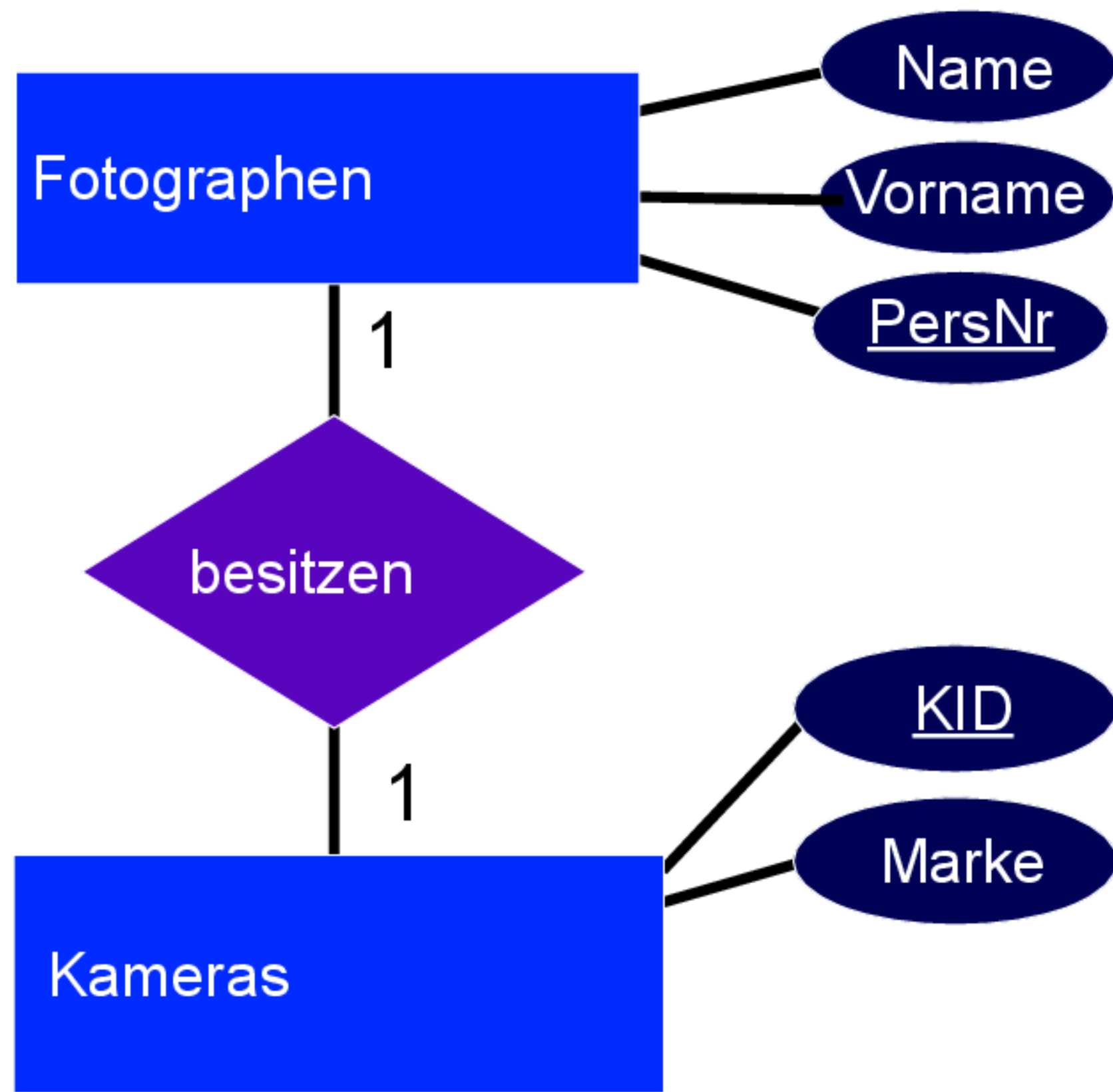
[Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}

[Kameras] : {[ KID: int, Marke: string, **PersNr: int** ]}





# 1:1 Vereinfachen, Option 2

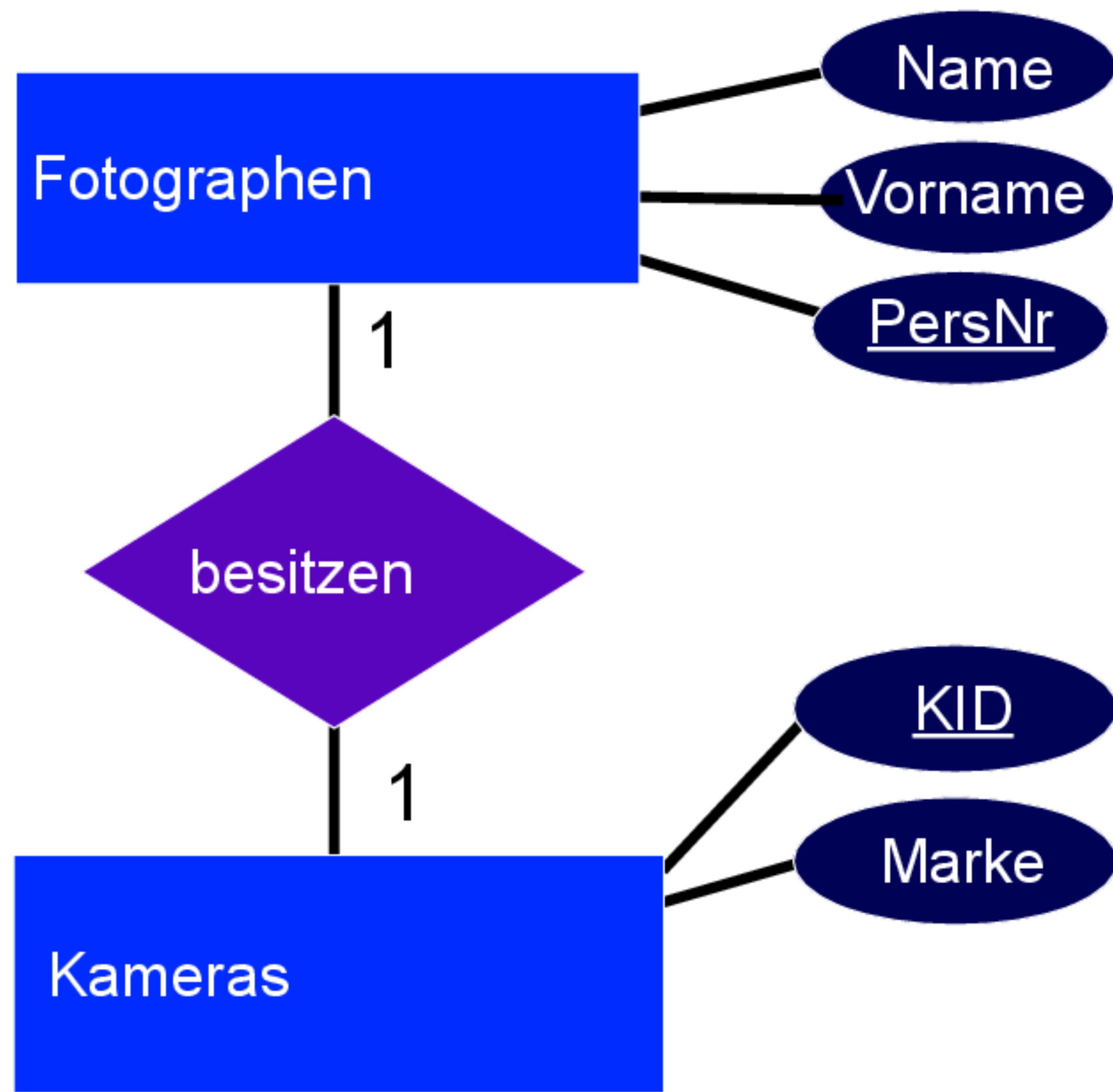


[Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}

[besitzen] : {[ PersNr: int, KID: int ]}

[Kameras] : {[ KID: int, Marke: string ]}

# 1:1 Vereinfacht, Option 2

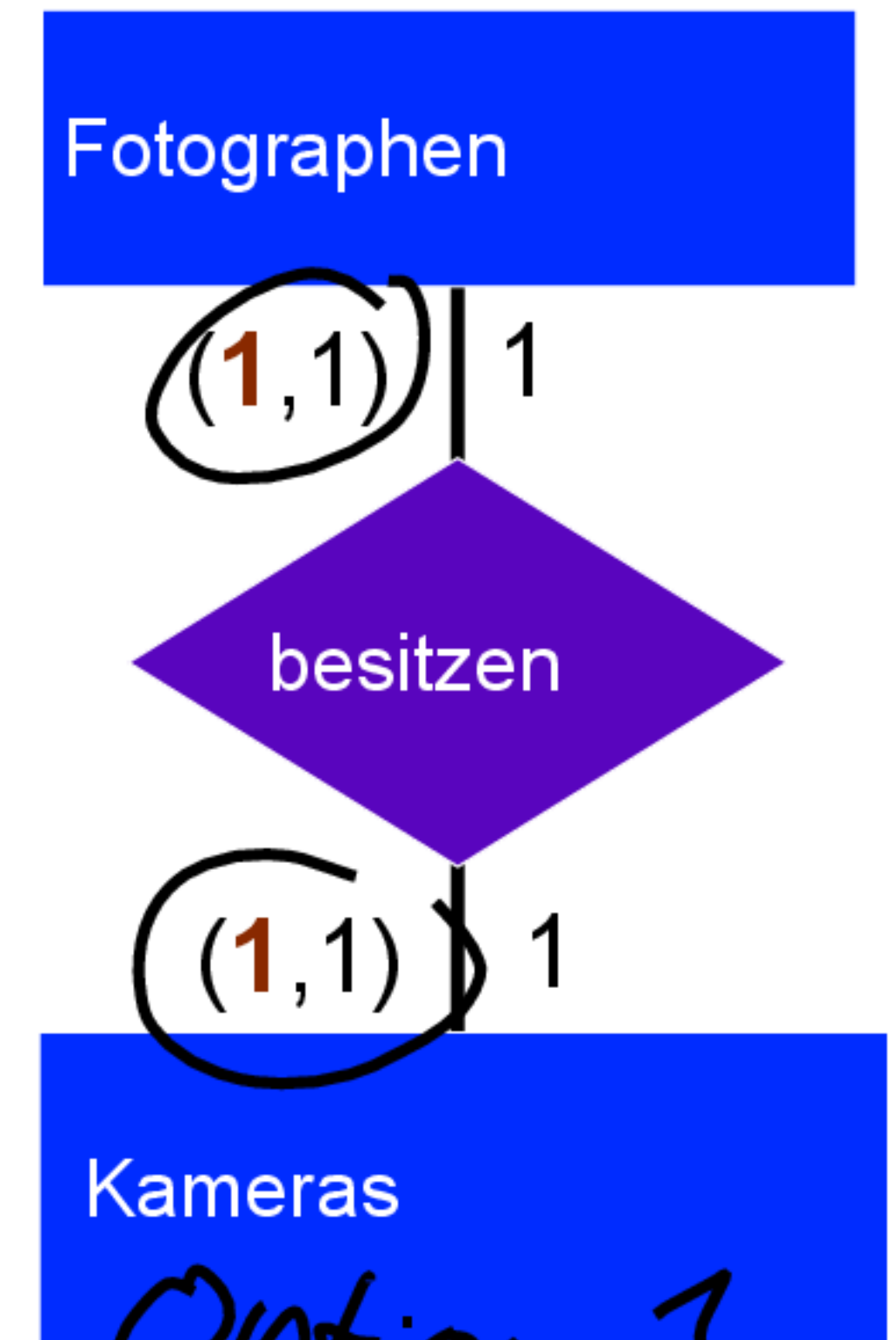
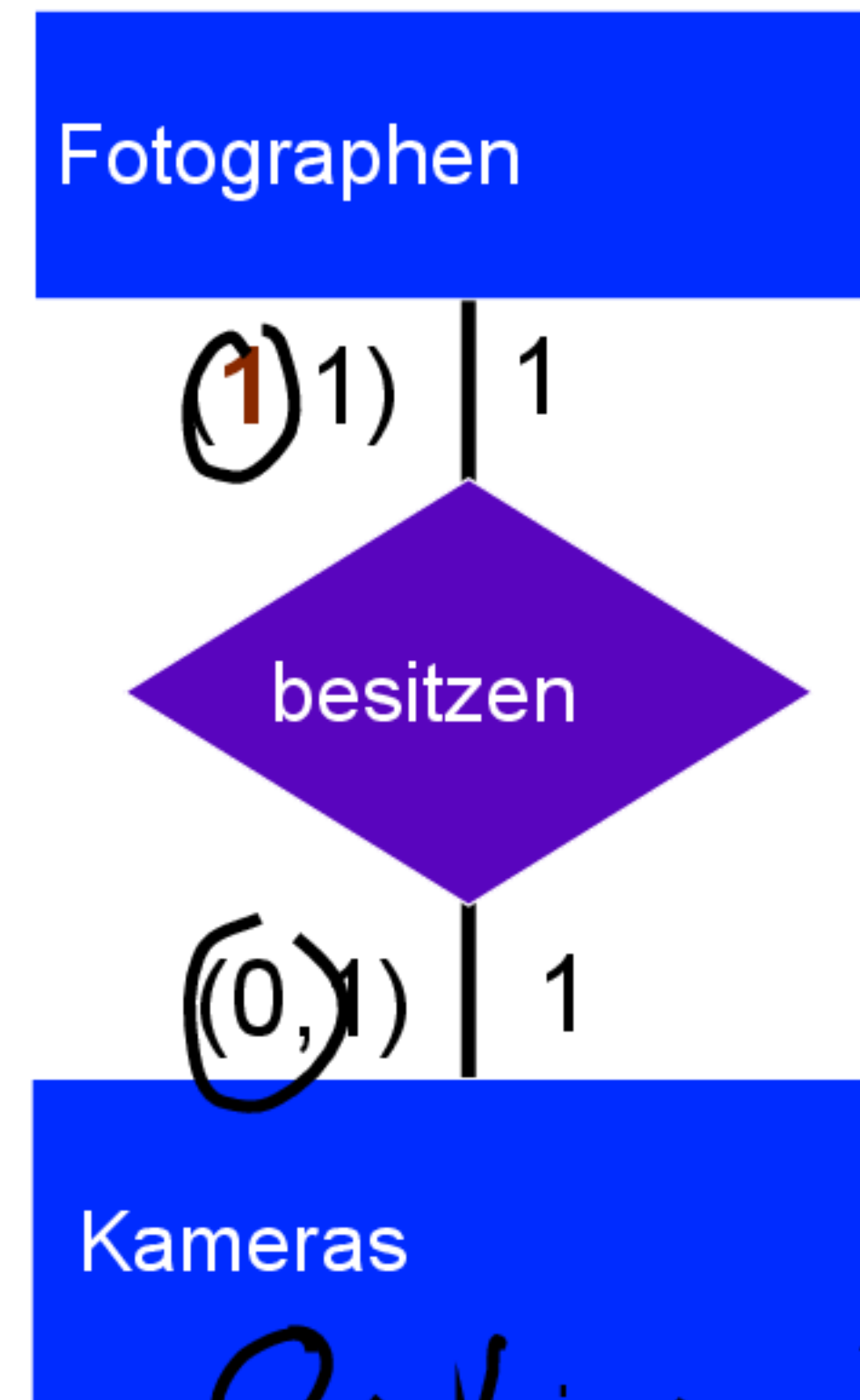
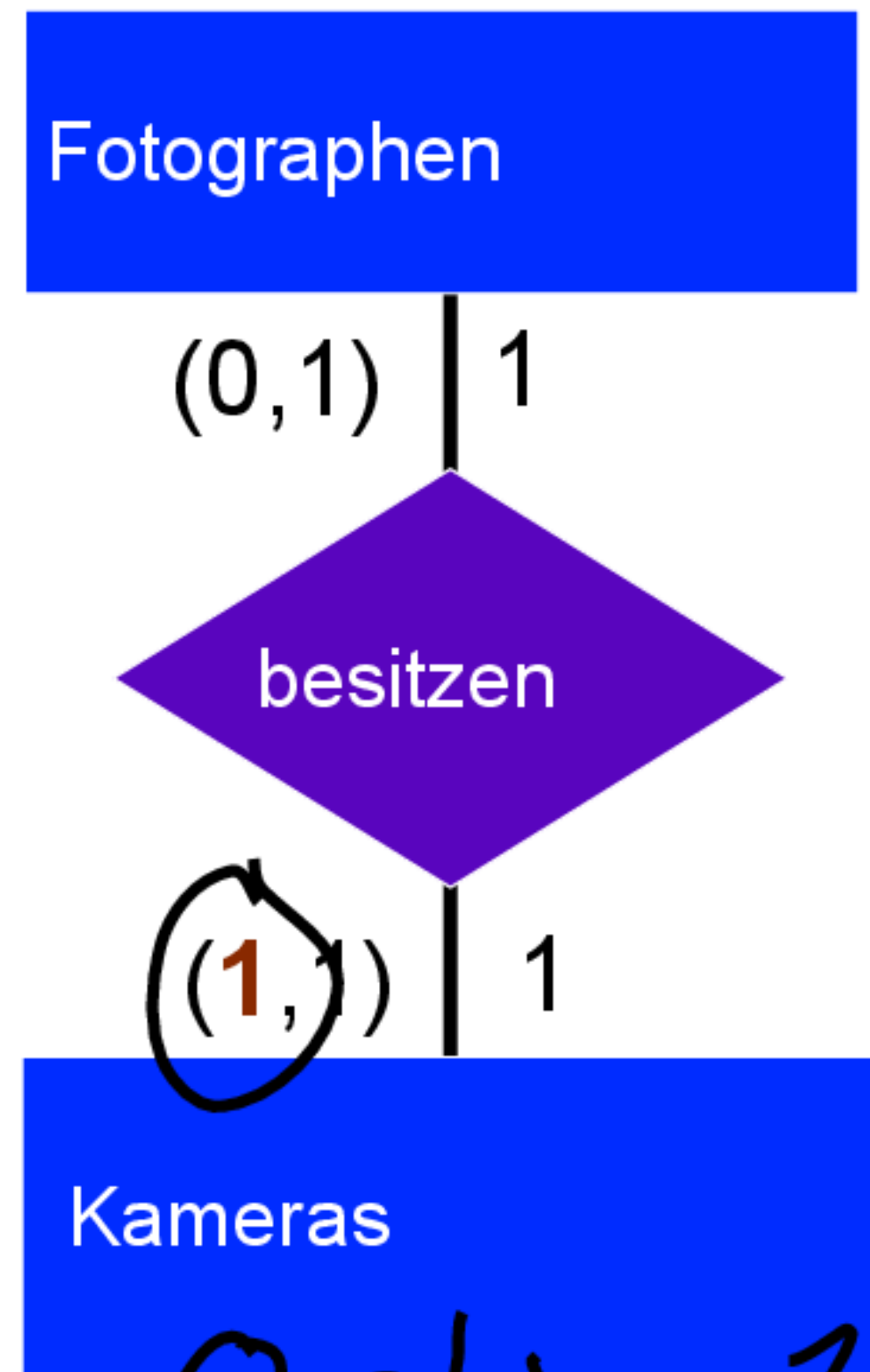
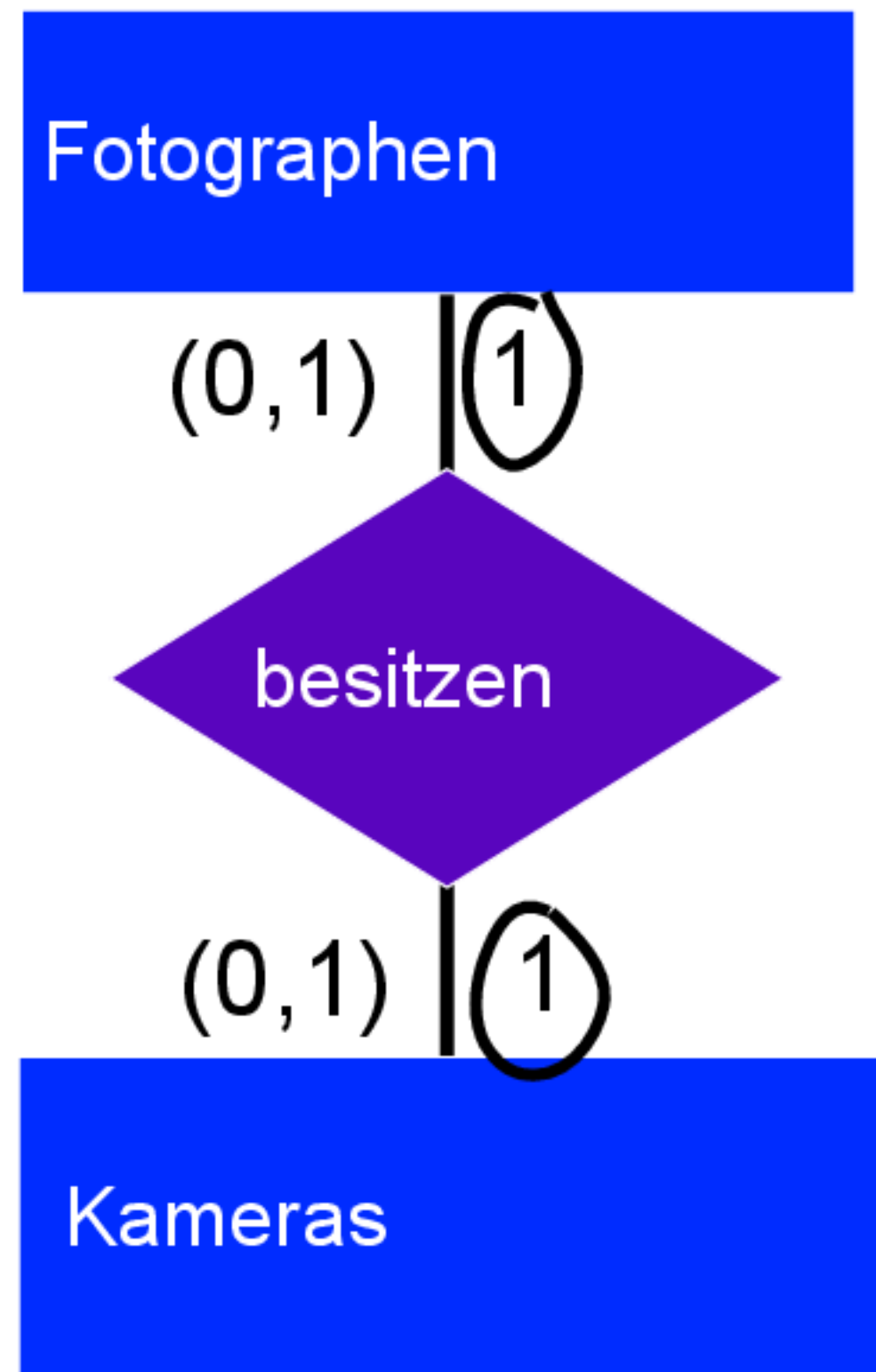


→ [Fotographen] : {[ Name: string, Vorname: string, PersNr: int, besitztKamera: int ]}

→ [Kameras] : {[ KID: int, Marke: string ]}

# Vermeidung fehlender Fremdschlüsseinträge

NULL



Option 1

Option 2

Option 1

oder  
Option 2

Option 1: [Fotographen] : {[ Name: string, Vorname: string, PersNr: int ]}  
 [Kameras] : {[ KID: int, Marke: string, **PersNr: int** ]}

Option 2: [Fotographen] : {[ Name: string, Vorname: string, PersNr: int, **besitztKamera: int** ]}  
 [Kameras] : {[ KID: int, Marke: string ]}