ARRESTEE	data_year	arrestee_id	incident_id	arrestee_seq_num	arrest_date	arrest_type_id	multiple_indicator	offense_code	age_id	age_num	sex_code	race_id	ethnicity_id	resident_code	age_range_low_num

ARRESTEE TYPE	arrest_type_id	arrest_type_code	arrest_type_name

BIAS LIST	bias_id	bias_code	bias_category	bias_desc

BIAS MOTIVATION	data_year	bias_id	offense_id

ETHNICITY	ethnicity_id	ethnicity_code	ethnicity_name

INCIDENT	data_year	agency_id	incident_id	nibrs_month_id	cargo_theft_flag	submission_date	incident_date	report_date_flag	incident_hour	cleared_except_id	cleared_except_date	incident_s	data_home	orig_format	did

OFFENSE	data_year	offense_id	incident_id	offense_code	attempt_complete_flag	location_id

OFFENSE TYPE	offense_code	offense_name	crime_against	ct_flag	hc_flag	hc_code	offense_category_name	offense_group

VICTIM	data_year	victim_id	incident_id	victim_seq_num	victim_type_id	assignment_type_id	activity_type_id	outside_agency_id	age_id	age_num	sex_code	race_id	ethnicity_id	resident_status_code	age_range_low_num

VICTIM OFFENSE	data_year	victim_id	offense_id

VICTIM TYPE	victim_type_id	victim_type_code	victim_type_name

PROPERTY	data_year	property_id	incident_id	prop_loss_id

PROPERTY DESC	data_year	property_id	prop_desc_id	property_value	date_recovered

PROPERTY DESC TYPE	prop_desc_id	prop_desc_name	prop_desc_code

PROPERTY LOSS TYPE	prop_loss_id	prop_loss_name	prop_loss_desc

ETHNICITY
ethnicity_code
ethnicity_id
ethnicity_name

ARRESTEE TYPE
arrest_type_code
arrest_type_id
arrest_type_name

INCIDENT
agency_id
cargo_theft_flag
cleared_except_date
cleared_except_id
data_home
data_year
did
incident_date
incident_hour
incident_id
incident_status
nibrs_month_id
orig_format
report_date_flag
submission_date

ARRESTEE
age_id
age_num
arrest_date
arrest_type_id
arrestee_id
arrestee_seq_num
data_year
ethnicity_id
incident_id
multiple_indicator
offense_code
race_id
resident_code
sex_code

VICTIM
activity_type_id
age_id
age_num
age_range_low_num
assignment_type_id
data_year
ethnicity_id
incident_id
outside_agency_id
race_id
resident_status_code
sex_code
victim_id
victim_seq_num
victim_type_id

VICTIM OFFENSE
data_year
offense_id
victim_id

BIAS LIST
bias_category
bias_code
bias_desc
bias_id

BIAS MOTIVATION
bias_id
data_year
offense_id

OFFENSE TYPE
crime_against
ct_flag
hc_code
hc_flag
offense_category_name
offense_code
offense_group
offense_name

OFFENSE
attempt_complete_flag
data_year
incident_id
location_id
offense_code
offense_id

VICTIM TYPE
victim_type_code
victim_type_id
victim_type_name

PROPERTY
prop_loss_
prop_loss_
prop_loss_

PROPERTY
data_year
incident_id
prop_loss_id
property_id

PROPERTY DESC
data_year
date_recovered
prop_desc_id
property_id
property_value

PROPERTY DESC TYPE
prop_desc_code
prop_desc_id

1. One to Many

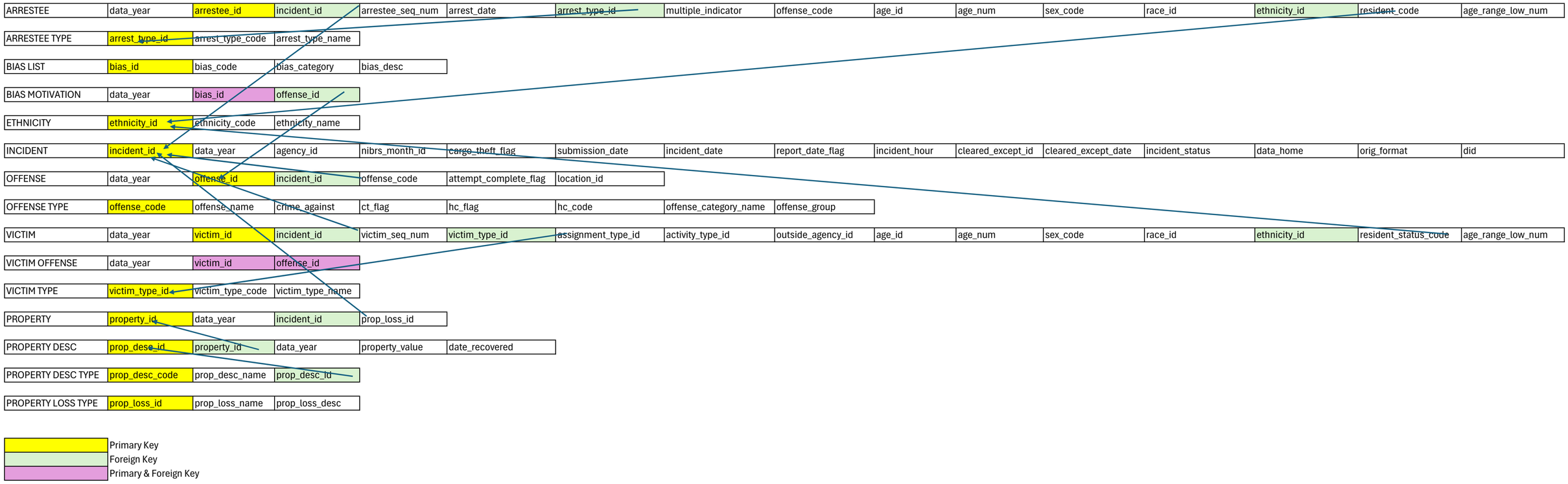
INCIDENT -> OFFENSE
INCIDENT ->VICTIM
OFFENSE -> BIAS_MOTIVATION
BIAS_LIST -> BIAS_MOTIVATION
OFFENSE -> VICTIM_OFFENSE
VICTIM -> VICTIM_OFFENSE
PROPERTY -> PROPERTY_DESC
PROP_DESC_TYPE -> PROPERTY_DESC
PROP_LOSS_TYPE -> PROPERTY

2. Many to Many

VICTIM - OFFENSE
OFFENSE - BIAS

3. Many to one
OFFENSE -> INCIDENT
VICTIM ->INCIDENT
VICTIM_OFFENSE ->VICTIM
VICTIM_OFFENSE -> OFFENSE
PROPERTY_DESC -> PROPERTY
PROPERTY -> PROP_LOSS_TYPE
PROPERTY_DESC -> PROP_DESC_TYPE

4. One to One
ETHNICITY -> VICTIM / ARRESTEE
ARREST_TYPE -> ARRESTEE


ARRESTEE
data_year
arrestee_id
incident_id
arrestee_seq_num
arrest_date
arrest_type_id
multiple_indicator
offense_code
age_id
age_num
sex_code
race_id
ethnicity_id
resident_code
age_range_low_num
ARRESTEE TYPE
arrest_type_id
arrest_type_code
arrest_type_name
BIAS LIST
bias_id
bias_code
bias_category
bias_desc
BIAS MOTIVATION
data_year
bias_id
offense_id
ETHNICITY
ethnicity_id
ethnicity_code
ethnicity_name
INCIDENT
incident_id
data_year
agency_id
nibrs_month_id
cargo_theft_flag
submission_date
incident_date
report_date_flag
incident_hour
cleared_except_id
cleared_except_date
incident_status
data_home
orig_format
did
OFFENSE
data_year
offense_id
incident_id
offense_code
attempt_complete_flag
location_id
OFFENSE TYPE
offense_code
offense_name
crime_against
ct_flag
hc_flag
hc_code
offense_category_name
offense_group
VICTIM
data_year
victim_id
incident_id
victim_seq_num
victim_type_id
assignment_type_id
activity_type_id
outside_agency_id
age_id
age_num
sex_code
race_id
ethnicity_id
resident_status_code
age_range_low_num
VICTIM OFFENSE
data_year
victim_id
offense_id
VICTIM TYPE
victim_type_id
victim_type_code
victim_type_name
PROPERTY
property_id
data_year
incident_id
prop_loss_id
PROPERTY DESC
prop_desc_id
property_id
data_year
property_value
date_recovered
PROPERTY DESC TYPE
prop_desc_code
prop_desc_name
prop_desc_id
PROPERTY LOSS TYPE
prop_loss_id
prop_loss_name
prop_loss_desc
Primary Key
Foreign Key
Primary & Foreign Key

ETHNICITY		Type
PK	ethnicity_id	INT A
	ethnicity_code	CHAR(1) A
	ethnicity_name	VARCHAR(50) A

ARRESTEE		Type
PK	arrestee_id	BIGINT A
	data_year	INT A
	incident_id	BIGINT A
	arrestee_seq_num	INT A
	arrest_date	DATE C
FK	arrest_type_id	INT A
	multiple_indicator	CHAR(1) A
	offense_code	VARCHAR(10) A
	age_id	INT A
	age_num	INT A
	sex_code	CHAR(1) A
	race_id	INT A
FK	ethnicity_id	INT A
	resident_code	CHAR(1) A
	under_18_disposition_co	CHAR(5) A
	clearance_ind	CHAR(1) A
	age_range_low_num	INT A
	age_range_high_num	INT A

ARREST_TYPE		Type
PK	arrest_type_id	INT A
	arrest_type_code	VARCHAR(10) A
	arrest_type_name	VARCHAR(50) A

OFFENSE_TYPE		Type
PK	offense_code	VARCHAR(10) A
	offense_name	VARCHAR(100) A
	crime_against	VARCHAR(50) A
	ct_flag	CHAR(1) A
	hc_flag	CHAR(1) A
	hc_code	VARCHAR(5) A
	offense_category_name	VARCHAR(50) A
	offense_group	CHAR(1) A

OFFENSE		Type
PK	offense_id	BIGINT A
	data_year	INT A
FK	incident_id	BIGINT A
FK	offense_code	VARCHAR(10) A
	attempt_complete_flag	CHAR(1) A
	location_id	INT A
	num_premises_entered	INT A
	method_entry_code	VARCHAR(10) A

INCIDENT		Type
PK	incident_id	BIGINT A
	data_year	INT A
	agency_id	INT A
	nibrs_month_id	BIGINT A
	cargo_theft_flag	CHAR(1) A
	submission_date	TIMESTAMP C
	incident_date	DATE C
	report_date_flag	CHAR(1) A
	incident_hour	INT A
	cleared_except_id	INT A
	cleared_except_date	DATE C
	incident_status	VARCHAR(20) A
	data_home	CHAR(1) A
	orig_format	CHAR(1) A
	did	BIGINT A

PROPERTY_LOSS_TYPE		Type
PK	prop_loss_id	INT A
	prop_loss_name	VARCHAR(50) A
	prop_loss_desc	VARCHAR(100) A

BIAS_MOTIVATION		Type
FK	bias_id	INT A
FK	offense_id	BIGINT A
	data_year	INT A

PROPERTY		Type
PK	property_id	BIGINT A
	data_year	INT A
FK	incident_id	BIGINT A
FK	prop_loss_id	INT A
FK	prop_desc_id	INT A

BIAS_LIST		Type
PK	bias_id	INT A
	bias_code	VARCHAR(10) A
	bias_category	VARCHAR(50) A
	bias_desc	VARCHAR(100) A

PROPERTY_DESC		Type
FK	prop_desc_id	INT A
FK	property_id	BIGINT A
	data_year	INT A
	property_value	VARCHAR(50) A
	date_recovered	DATE A
PK	nibrs_prop_desc_id	INT A

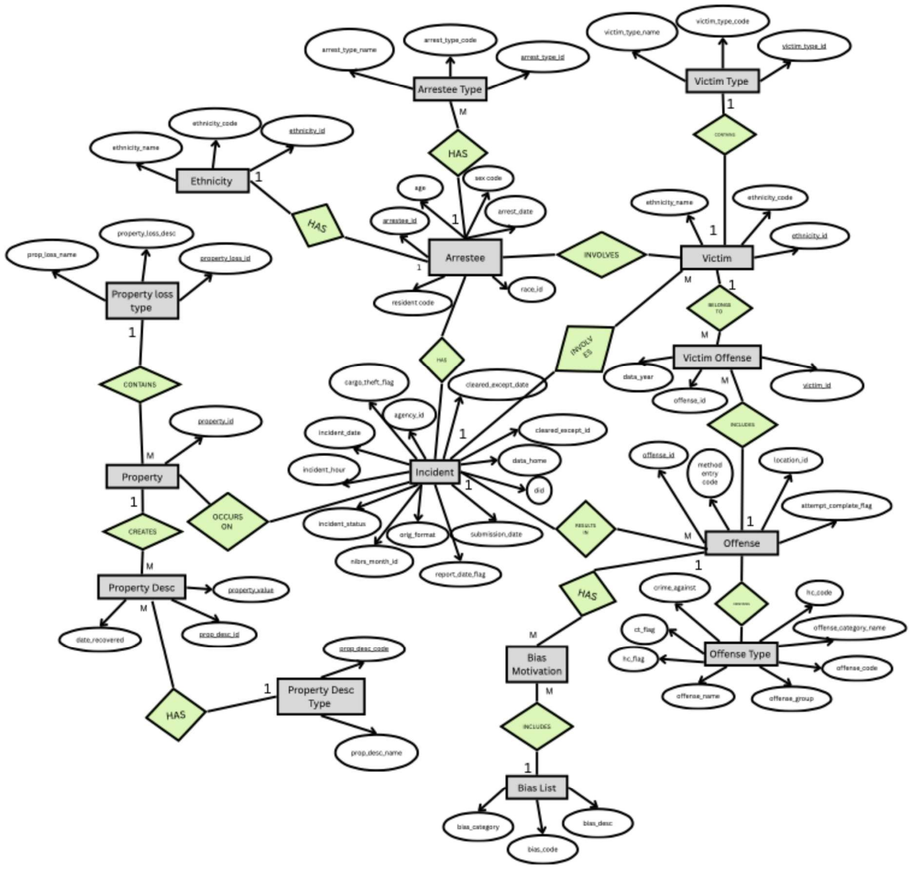
PROPERTY_DESC_TYPE		Type
PK	prop_desc_id	INT A
	prop_desc_name	VARCHAR(50) A
	prop_desc_code	CHAR(10) A

VICTIM_OFFENSE		Type
FK	victim_id	BIGINT A
FK	offense_id	BIGINT A
	data_year	INT A

VICTIM		Type
PK	victim_id	BIGINT A
	data_year	INT A
FK	incident_id	BIGINT A
	victim_seq_num	INT A
FK	victim_type_id	INT A
	assignment_type_id	INT A
	activity_type_id	INT A
	outside_agency_id	INT A
	age_id	INT A
	age_num	VARCHAR(10) A
	sex_code	CHAR(1) A
	race_id	INT A
	ethnicity_id	INT A
	resident_status_code	CHAR(1) A
	age_range_low_num	INT A
	age_code_range_high	INT A

ETHNICITY		Type
PK	ethnicity_id	INT A
	ethnicity_code	CHAR(1) A
	ethnicity_name	VARCHAR(50) A

VICTIM_TYPE		Type	Type
PK	victim_type_id	INT	A
	victim_type_code	CHAR(1)	A
	victim_type_name	VARCHAR(50)	A



1.Provide your opinion on the data files. Are they tidy and organized? Suggest improvements

The NIBRS data files are useful overall, despite their lack of organization and standardization.The datasets arrangement varies throughout files, despite the fact that they provide essential information for modeling crime occurrences. Importing data into a relational database and mapping relationships are made more difficult by column names that frequently conflict with the data dictionary (for example, Offense Code vs. Offense Type ID). The analytical relevance of certain properties is limited by the presence of sparsely populated or missing fields, like method_entry_code, that are not well documented.

Additionally, several variables, such as age_id and age_num, seem redundant because they lack clear distinctions.We suggest eliminating or documenting low-value columns, combining redundant or ambiguous properties, and standardizing field names across the dictionary and the CSV headers in order to increase usability. By making these adjustments, the dataset would become more logical, query-friendly, and compliant with database normalization guidelines.