DW Minor Project Proposal

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Project Title: What educational institute will you select to do your B.Tech.

Problem Statement: We need to design a GUI based application that would accept various components of DIEM model and save it in an SQL server based database.

We would be considering the following components:

1. Decision
2. Action
3. Uncertainties
4. Objectives

We are modelling our application specifically for our problem.

Decision: What educational institute to select for B.Tech. ?

Action: Apply for college

Uncertainties: Some uncertainties are deterministic whose outcome is known deterministically if another uncertainty is known.

We have uncertainties that are the source of informational edges and are used in taking the decision and those that are source of functional edges and are used in calculating the values/outcomes.

The uncertainties are displayed in the influence diagram.

Values/Outcomes: 1. Placements
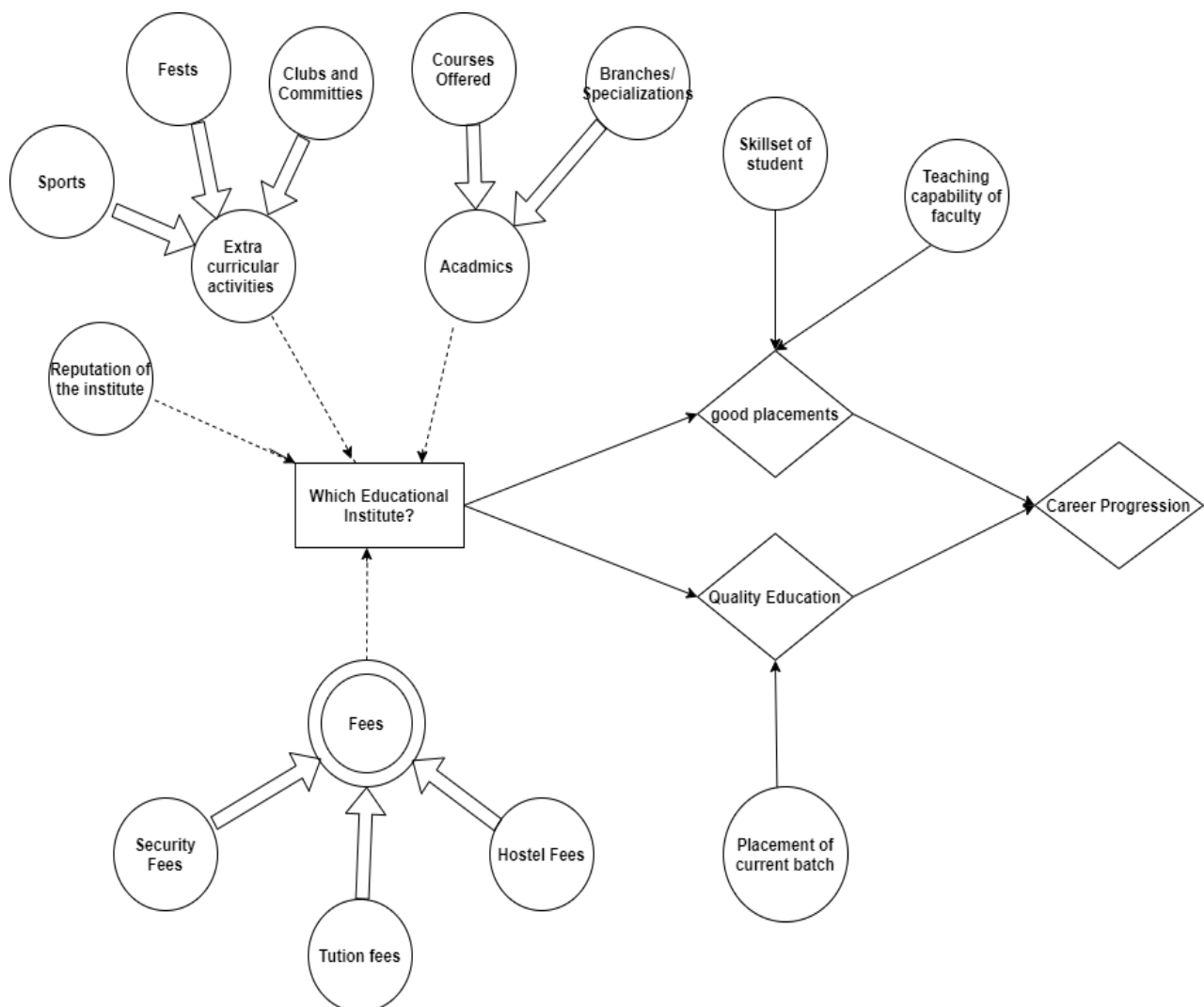2. Academic Learning
3. Career Progression

Objectives: Some possible objectives for our problem are
1. Min cost
2. Min distance from home
3. Max academic learning
4. Max exposure

Order of insertion
1. Add Decision
2. Add Values
3. Add uncertainties (informational after decision has been added, functional after values have been added, conditional after sink node uncertainties)
4. Actions after Decision

Influence Diagram

Proposed UI

Home   Decision   Action   Uncertainties   Objectives   Values

Input Decision

Input Action

Input Values

Input Uncertainities

Input Objectives

Home   Decision   Action   Uncertainties   Objectives   Values

Enter the decision you want to make

Save

Enter the action associated with the decision

Save

Input values associated with Decision

◉ Dependant

Select Values   ▼

Save

Enter the uncertainity

☑ Deterministic

Next

Input Objectives for the Decision   Select Imperative ▾

Save

◉ Informational

◉ Functional

◉ Conditional

| Select Value ▾ |

| Select Source Uncertainties ▾ |

| Next |

Select Action

| Select Action ▾ |

Attribute associated with the action

| |

| Save |

Enter Number of Alternatives to be
considered

Save

Action Object

Objective Object

Uncertainity Object

Select Alternative ▼

Select Attribute ▼   Value

Save

Select Alternative ▼

Select Objective ▼   Value   [   ]

Save

DB Schema

Alternatives

PK	Alt_id
	Alt_name

Action_object

PK	Alt_id
	Attr1.Attr2...Attr n

Uncertainity_Object

PK	Alt_id
	u1,u2...un

Objectives_Object

PK	Alt_id
	Obj1,Obj2,... Obj n

◇ Recorded_as

◇ Has_parameters

◇ Represented_as

Action

PK	AId
	Action_name

Objectives

PK	OId
	Imperative_verb
	Noun

Informs(Relation Table)

FK	DId
FK	UId

◇ triggers

◇ evaluated_by

◇ informs

Uncertainity

PK	UId
	Uncertaininty_name
	CHECK(conditional, informational, functonal)

Decision

PK	DId
	Decision_name

Value

PK	VId
	value_name
	CHECK(dependent, independent)

◇ calculate

Fuctions (Relation Table)

FK	UId
FK	VId

◇ determine

Value_dependency(Relaton table)

FK	VId1
FK	VId2