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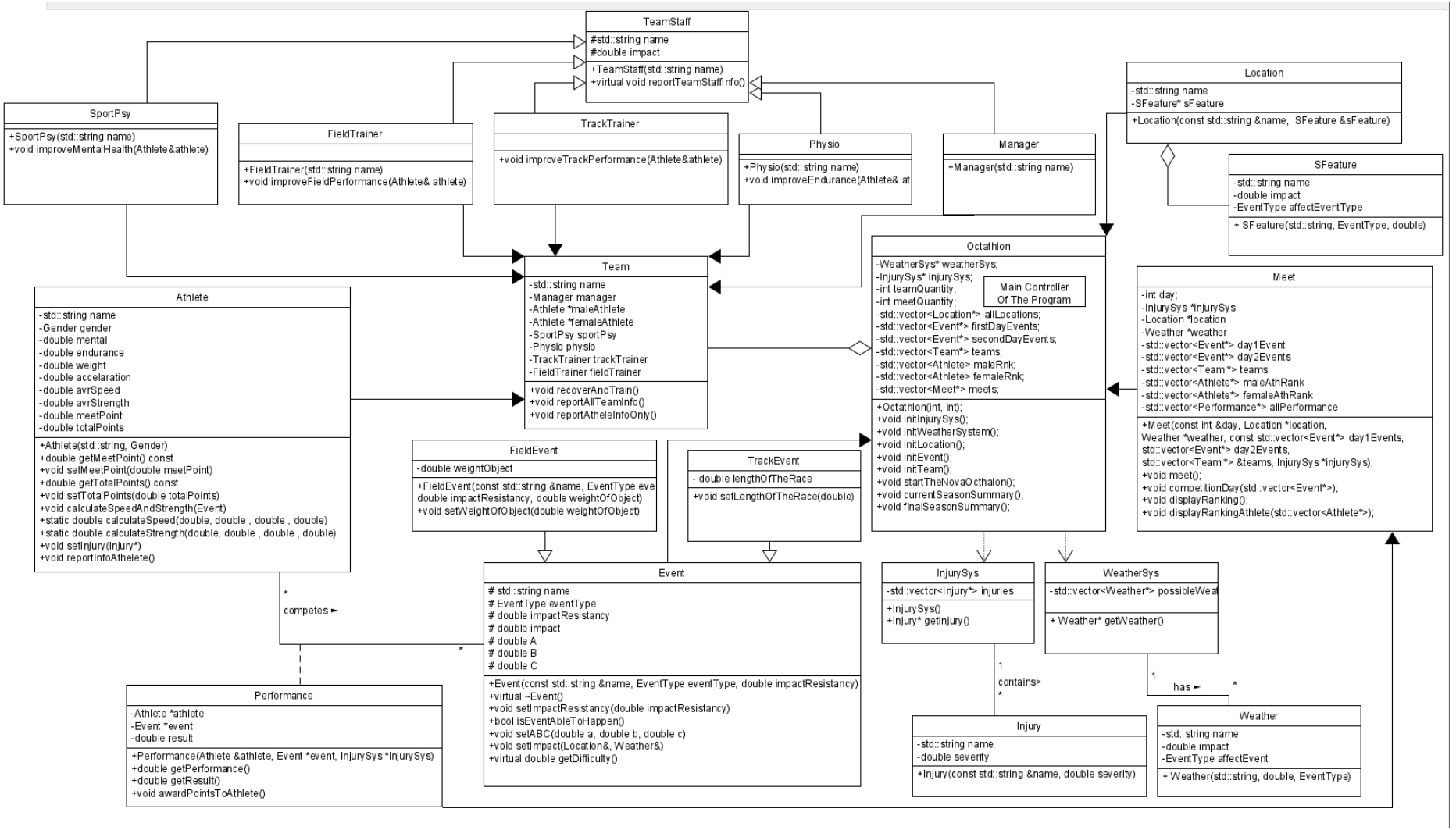
Lab class: CL/03



1. **Describe the events that you will be adding to your Octathlon. Explain the scoring of them**

All of my added events belong to TRACK and FIELD categories. Name, and scoring parameters of them are:

Name	**A**	**B**	**C**
Javelin throw F1	10.14	7	1.08
400 m T1	1.53775	82	1.81
110 m hurdles T2	5.74352	28.5	1.92
Shot put F2	51.39	1.5	1.05

LengthOfRace attribute is added to TrackEvent. It is used along with athlete's average speed to calculate parameter **P**
In a same idea, WeightOfObject attribute is added to FieldEvent.
LengthOfRace and WeightOfObject are just relative value compared to actual values in real life

2. **Describe qualitatively, so not numerically, the characteristics you use for the athletes.**
   Athletes has these attributes:
   - acceleration
   - Weight
   - Endurance
   - Mental Health
     These value are used to calculate the next attributes being:
   - Average Speed
   - Average Strength (Force of throwing object)
     Specifically, the more acceleration, the more average speed. The more weight, the more force of throwing object.
     Endurance and Mental Health also contribute a significant portion in average speed and strength. Decrease and Increase on these values will have impact on athlete performance in both types of events
3. **Describe the special features possible for locations, and how they impact on performance.**
   Special feature has impact rate and the specific type of event that they will affect. Special feature will increase "environment impact" attribute of the event, which is later be used to negatively impact the calculation of average speed (TRACK) or average strength(FIELD)
4. **Describe the characteristics of the support staff for each team and qualititatively how those impact on the team activities**
   All support staff share their attributes being "name", "impact". TrackTrainer improves acceleration. FieldTrainer improves weight. Physiothera improves endurance. Sport Psychologist improves mental health.

5. **Describe the process you use to determine performance in each event. In particular, this should reference the characteristics mentioned in the previous point, and should take into account the functionality implied by the roles of the support staff.**

   Firstly, athlele's average speed and average force (strength) will be calculated (taking into account the environment impact caused by special feature and weather). Accelaration and Weight will account for the most percent, next is endurance then performance. The result is then decreased a bit by the environment impact.

   Next the athlete competes. Injury may happen. If injury happen, all attributes will be decreased significantly.

   For track event, result is event's length of race divided by average speed. For field event, result is athlete's average strength divided by weight of object.

   After each meet, all support staff will help increase attributes of athlete which help them recover and score better in next meet.

   Ranking is important to athlete mental health. If they don't get a medal, their mental health will be decreased

6. **Describe your weather system, and how that impacts on your events.**
   Weather system has a bunch of feasible weathers. It uses a random engine to get one of those weather in each day when a competition is ran.
   Weather increases environment impact attribute of event.
   If the weather makes environment impact exceed what the event can endure, the event will be cancelled