BreakfastPlate	LunchPlate
string MealType	string MealType

DinnerPlate
string MealType

Form
UserProfile users[]
UserProfile currentUser
AddProfile(string userID, strir
Login(string userID, string pa
Logout()
RemoveProfile(string userID,

Partial UML class diagram (edges cut off at left and right margins).

Left class (partially visible):
- ...ng password)
- ...ssword)
- ...string password)

Center class:

UserProfile

- string userID
- string password
- Planhandler planManager

- GetMeal(Plate meal)
- GetDailyGoals(DateTime date)
- CreateFoodItem(string name, Category categories)
- CreateMealPlan(DateTime date)
- SetGoal(Goal dailyGoal)
- GetGoal(int group)
- GetFoodItems()

Right class (partially visible):

- Category da...
- Plate mealF...
- FoodItem fo...
- PlateFactor...

- CreateFood...
- DeleteFood...
- CreatePlate...
- DisplayMea...
- DisplayDaily...
- GetDailyGo...
- SetDailyGo...
- ChangeFoo...
- ChangeFoo...
- GetAvailabl...

Multiplicities on associations: * , 1 , 1 , 1 , 1

```
                    string MealType                      string MealType                              s

                                                                                                      |
                                                                                                      |
                                   ┌──────────────────────────────────────────────────────────────┐  |
                                   │          │          │                          │               │  |
                                   ▽          ▽          ▽
┌─────────────────────────────────────────┐        ┌──────────────────────────────────────────┐
│              Planhandler                 │    1   │                   Plate                    │
├─────────────────────────────────────────┤  0...* ◇├──────────────────────────────────────────┤
│ ailyGoals[]                              │        │ FoodItem foods[]                           │
├─────────────────────────────────────────┤   ─1────┤ Category foodCategories[]                  │   ─1─
│ Plans[]                                  │    1   │ string mealType                            │
├─────────────────────────────────────────┤   ─1───┤ Date mealDate                             │
│ ods[]                                    │        ├──────────────────────────────────────────┤
├─────────────────────────────────────────┤        │ AddFoodItem(FoodItem food)                 │
│ y plateFactory                           │        │ RemoveFoodItem(FoodItem food)              │
├─────────────────────────────────────────┤        │ Display()                                  │
│ Item(string name, float count, Categories categories)│    │                                      │
│ Item(FoodItem food)                      │        │                                            │
│ (MealType mealType, Date date)           │  0..* ◇└──────────────────────────────────────────┘
│ l(Plate meal)                            │
│ yGoals(Date date)                        │ ┌───────────────────────────┐
│ al(FoodGroup foodgroup)                  │ │          FoodItem          │
│ al(Category category)                    │ 0..* ◇├───────────────────────────┤
│ dItemServings(string name float newServings)│  │ string name               │
│ dItemGroups(string name FoodGroup groups[])│   │ Category category         │  ─1─
│ eFoods()                                 │     ├───────────────────────────┤
└─────────────────────────────────────────┘     │ ChangeName(string name)   │
                                                 │ ChangeName(string name)   │
                                                 └───────────────────────────┘


                              ┌────────────────────────────────────────────────┐
                              │                  PlateFactory                    │
                            ◇├────────────────────────────────────────────────┤
                              │ Dictionary<string(mealtype), Type>              │
                              ├────────────────────────────────────────────────┤
                              │ CreatePlate(string mealType, DateTime date)      │
                              │ TraverseAvailableMealTypes(OnMealType onMealType)│
                              └────────────────────────────────────────────────┘
```

string MealType

Category
FoodGroup groups[]
float servings

0...5

5

1

1...5

1

<<enumeration>> *FoodGroup*
Fruit
Vegetable
Protein
Grain
Dairy