26. AntMe Programming Lab

In this lab, you learn about the AntMe environment and start with programming the final assignment.
This lab requires a C# development environment such as Microsoft C# Visual Studio. Such an environment is available on the virtual machines provided by the Faculty of Computer Science.

1. Set up the Environment

Download AntMe from the course webpage. Then open the file *AntMeProject.sln*. Navigate to the file *antIntelligence.cs*. Replace *firstName="Alan"*, *lastName="Turing"* and *colonyName="myBasicAnts"* with your own name and a custom colony name, and run the project. If you find an ant colony with your name custom name, you have set things up correctly.

2. Make your Ants go in Circles

Copy the random-walk code from the lecture slides into the waits() procedure and run the simulation. Observe how the ants run in circles.

Customize the parameters so that the ants walk regular triangles.

3. Make your Ants collect Sugar and Fruits

Copy the code for collecting sugar from the lecture slides and run it.

Then, extend the code so that the ants also collect fruits.

4. Use Markers

Copy the code for using markers from the lecture slides. If everything goes right, you should now see ant streets.

5. Explore on your own

Try to make the ants run away from bugs, or fight bugs. Or try to customize the stats of your ants by using castes. Or, use markers to signal whenever a fruit needs more carriers, or no more carriers.