SUMMER INNOVATION CAMPUS

utad
www.utad.pt

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UTAD - QUINTA DE PRADOS
VILA REAL

CODE BATTLE

PREPARE YOUR DIGITAL ARMY AND CONQUER THE DIGITAL ARENA!
A competition between teams, with multiple rounds where, in the end, there will be only one winner. Join your team and prepare for the battle.

HOW?

Robocode is a programming game with the main objective to code a robot in order to be capable to compete on the virtual robots battle arena. Your mission is to program an invincible robot and many rounds against fearless opponents.

PREPARE YOUR TEAM TO THE BATTLE!

Team structure

A robot per team. Each member must code parts of the robot, for instance: Weapons, Movement, and others. The developed code must be shared using **http://codeshare.io**

Tournament structure

> Challenge types:
- ***Team vs team*** by eliminations
- ***Frenzy mode:*** All vs all in which all the robots will be placed in the same arena and will face each other until there is only one left.

Battle structure

Each battle has three rounds and the winner will be the first one to obtain two victories in the battle.

Game rules

> Each robot must be coded in a single file (there are no auxiliary files allowed)
- There is a maximum of 1000 code lines;
- Other external classes JAR/DLL cannot be used, except the necessary RoboCode framework;
- Pre-conceived robots (copied from the internet) cannot be used;
- It can be used any IDE (Eclipse, Netbeans, IntelliJ; Visual Studio, RoboCode editor, and others)
- After the opening briefing, each team will have 45 minutes to study the APIs;
- During the battle rounds, all teams must stop their coding. Only during pre-established breaks to code, it will be allowed;
- Robots can be optimized during 15 minutes between the battle rounds.

TUTORIAL

> http://robowiki.net
> https://www.tjleone.com/schoolbots.pdf

Concepts

> Energy Drop : http://robowiki.net/wiki/Energy_Drop
> Game Physics : http://robowiki.net/wiki/Robocode/Game_Physics
> Circular Targeting : http://robowiki.net/wiki/Circular_Targeting
> Dodge Bullets : https://www.ibm.com/developerworks/library/j-dodge/
> Other bots : http://robowiki.net/wiki/Category:Bot
> RoboCode JAVA Functions: http://robocode.sourceforge.net/docs/robocode/robocode/Robot.htm
> RoboCode .NET Functions: http://robocode.sourceforge.net/docs/robocode.dotnet/
> http://robocode.sourceforge.net/docs/robocode.dotnet/html/7b4f3527-1acc-a60b-d209-0dbe148a569d.htm

RoboCode Lessons

> Lesson #2: Battlefield Basics http://mark.random-article.com/weber/java/robocode/lesson2.html
> Lesson #3: Scanning Basics http://mark.random-article.com/weber/java/robocode/lesson3.html
> Lesson #4: Gun Basics http://mark.random-article.com/weber/java/robocode/lesson4.html
> Lesson #5: Movement Basics http://mark.random-article.com/weber/java/robocode/lesson5.html

IBM

> RoboCode Strategies https://www.ibm.com/developerworks/library/j-tipstrats/index.html
> Targeting: Circular https://www.ibm.com/developerworks/library/j-circular/

Sample Robots

> http://mark.random-article.com/robocode/lessons/JiggleOfDeath.jav

Misc

> RoboCode Project : http://mark.random-article.com/robocode/
> Youtube channel: https://www.youtube.com/user/RobocodeBattles

1st Prize: - Dois Monitors
– Monitor DELLAW2518H DELL, Monitor ALIENWARE 25" AW2518H G-SYNC 63.5CM BLACK 3Y AE or equivalent.
Prize sponsored by CRITICAL SOFTWARE,
https://www.criticalsoftware.com/pt/careers

CRITICAL SOFTWARE

worldit consulting services

2nd Prize: - Two Keyboards
- Mecanic Asus ROG Claymore PT Cherry MX or equivalent.
Prize sponsored by WORLDIT,
http://www.worldit.pt/

• 3º Prémio: - Two Headsets
- HyperX Cloud Revolver Pro or equivalent.
Prize sponsored by ST+I,
http://sti.pt/

sti

Microsoft

Participation Prize
a pair of glasses RV Microsoft for each team team
Prize sponsored by Microsoft Portugal

REGISTRATIONS

summerinnovationcampus.utad.pt
(teams with 2 elements, with a maximum 64 team)

INICIATIVA: INOV utad
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