2019 MakeX Robotics Competition - Zagreb, Croatia

ENGINEERING NOTEBOOK

TEAM: MM

TEAM NUMBER: XE035040

COMPETITION PROGRAM: City Guardian | Intermediate Group (12-16 years old)

CONTENTS

1. Team introduction

Team MM represents the King Tomislav Elementary school Našice. We met mBot robots in 2016 and since then robotics is an extracurricular activity for interested students.

The team has four members. Two contestants (students): Mate Knežević and Martin Kuric, and two coaches (mentors) Marija Ivanković and Vedrana Orešković. We are participating in MakeX for the first time.

1.1. Našice on the world map

Našice is a small town in eastern Slavonia. The favorable geographic location and abundance of natural resources were recognized by the Templars long ago. In the 12th century, they built town's prominent landmark, the church of St Martin. Hundred years later the Franciscans arrived to this area. In the early 18th century, Našice greeted the noble Pejačević family. The fact that two members of the noble family, count Ladislav and count Teodor Pejačević, earned the title of ban (viceroy) says a lot about their great reputation. They built two beautiful manor houses, a mausoleum, landscaped the big park around the manor houses and built quite big fishponds in the vicinity of the town.

Our town has always been a prominent center of culture, economy, crafts, trade, education, health care, sports, administration and transportation.

There are three schools in the town. Two elementary schools and a high school.

1.2. King Tomislav Elementary school Našice

Our school is attended by 631 students and 70 teachers. We advocate creativity, curiousness, innovation, teamwork, fun, sharing, sport, humanity... Our students are successful in various fields.

1.3. Brief biography of each team member

contestant Mate Knežević

“My name is Mate Knežević. I am 14 years old. I live near a town called Našice. In my spare time I play videogames and football.”

contestant Martin Kuric

“My name is Martin Kuric. I live in a small town called Našice. In my spare time I play videogames and football. I am 14 years old.”

mentor Marija Ivanković

“My name is Marija Ivanković. I work at King Tomislav Elementary school in Našice. I teach mathematics and computer science. For several years I’ve been mentoring students in leagues and robotics competitions. In my spare time I like to sing, dance and bake cookies”

mentor Vedrana Orešković

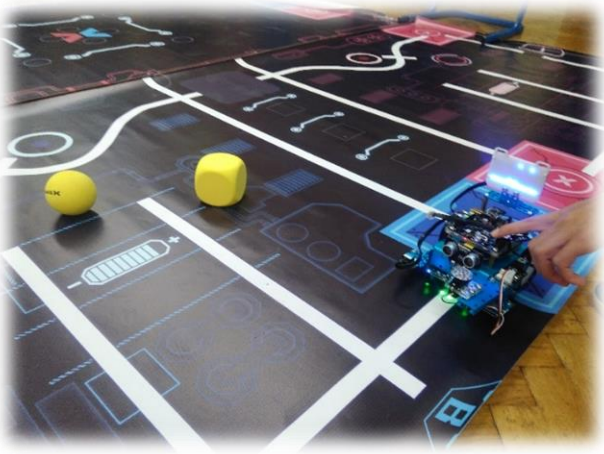
“My name iz Vedrana Orešković. I work at Isidor Kršnjavi high school in Našice. I teach electro technical group of subjects. I love innovations and elegant solutions to problems.”

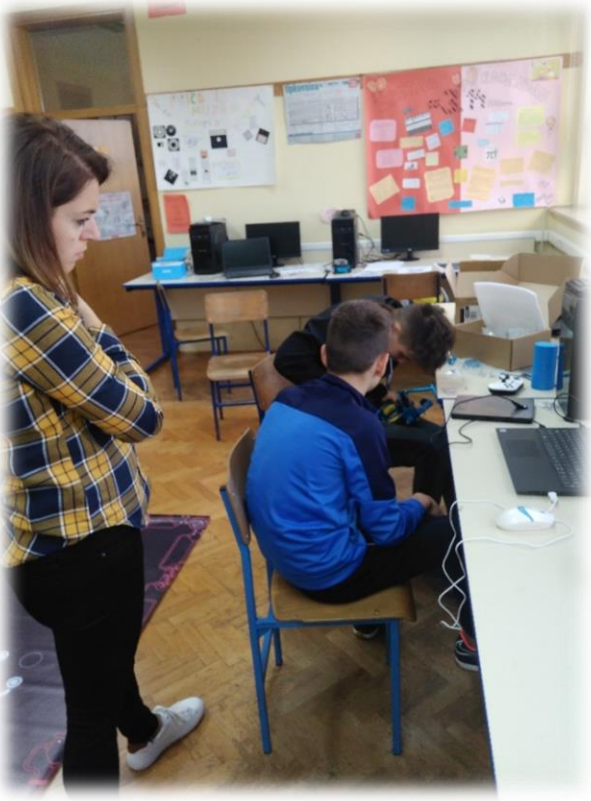
2. Process records

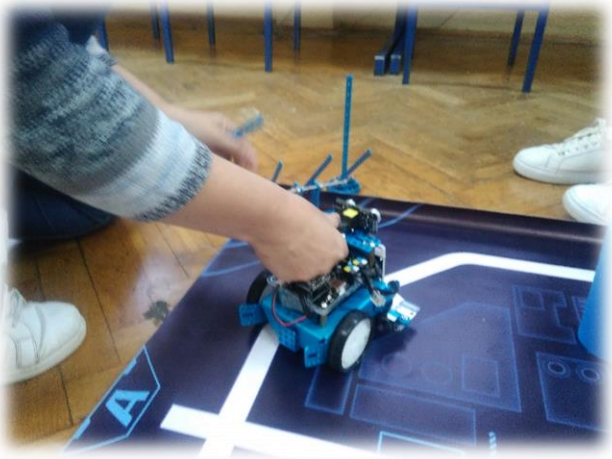
In the next few pages there are some pictures of robot construction, programing and some screenshots of solved programs for competition.

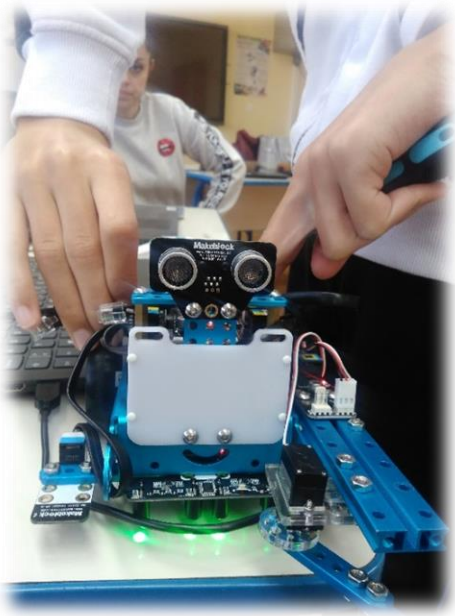
Our first solution for M09. CityParty and M01. Energy – saving Switch & M03 Aging Power Plant

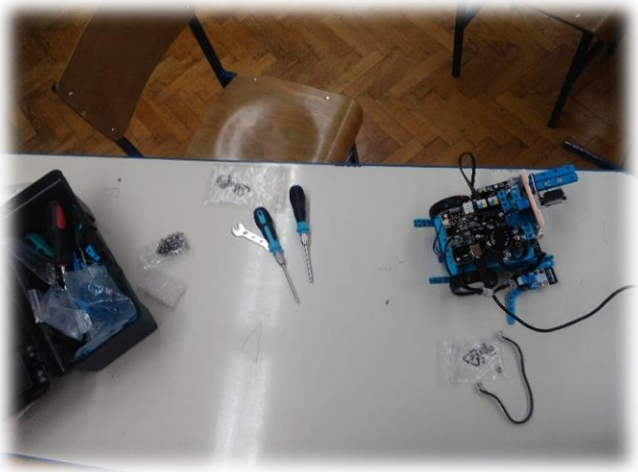
Here are the photos of preparation for MakeX.

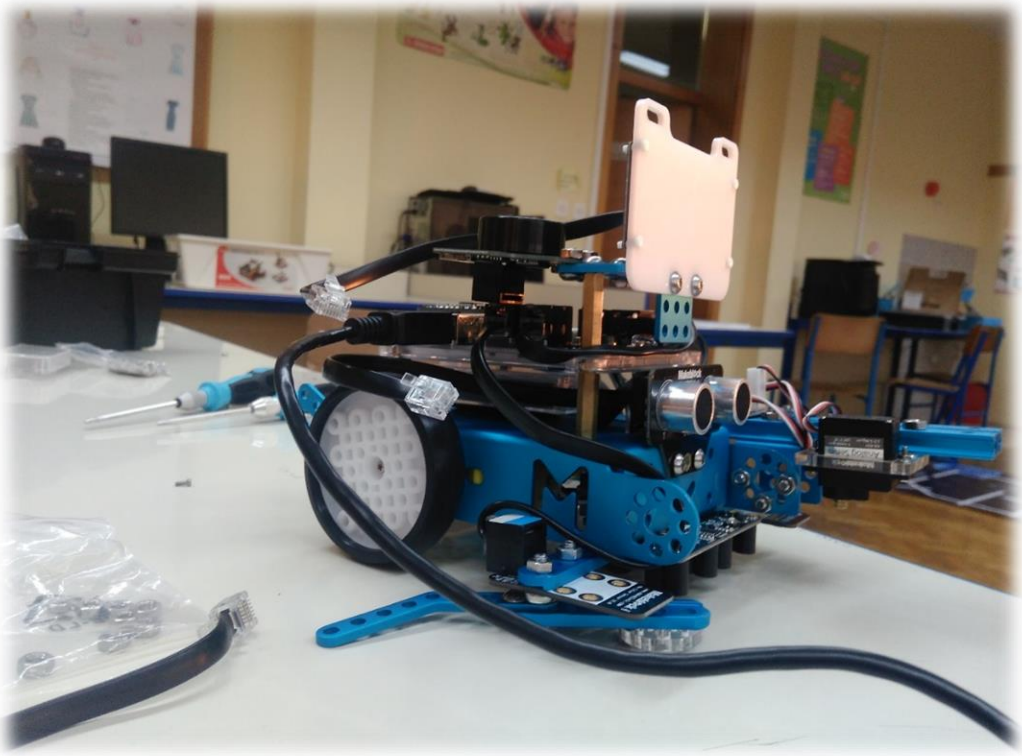


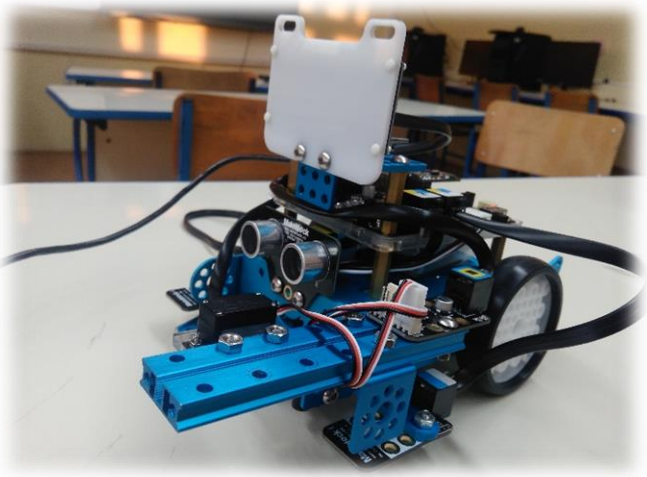


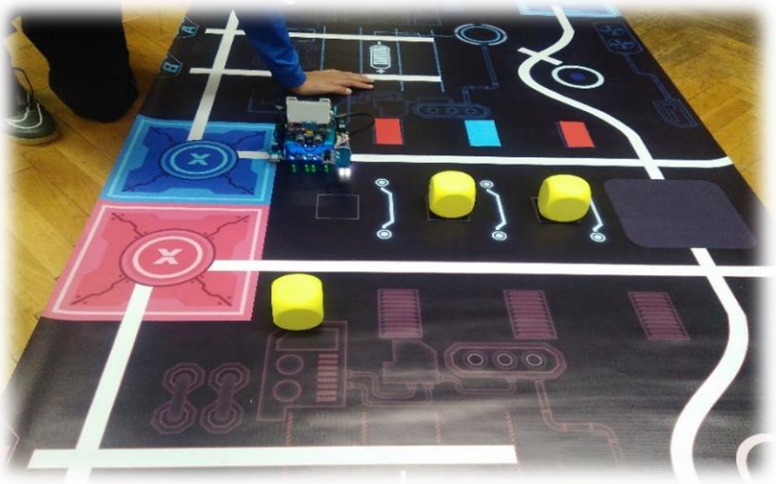












Final resolution for M01. Energy – saving Switch

Our solution for M05. Road Inspection

Our solution for M07. Waste Sorting

Part of the solution for M08. Forest Planting

3. Project summary

We had a lot of problems during the programming. But it was interesting and funny. We changed robot's structure many times, and at the end we learned many things and we did it! We are very satisfied with our solutions and hope to have a great race at the final competition.

4. Suggestions for competition

We suggest more flexibility in the rules and at least some points for individual situations.

We are ready to compete! 😊

M&M