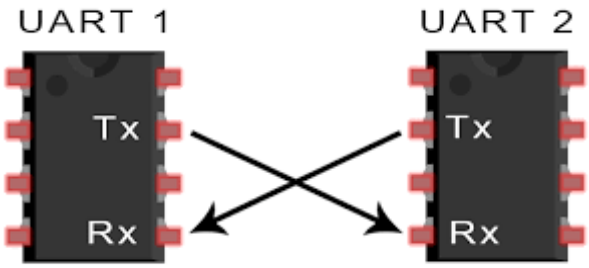
Statement: One of the most important concepts in the field of embedded software development is the concept of communication protocol. A communication protocol is a standardized way for two devices to send data back and forth. There are a lot of protocols that are being used by developers, including CAN, SPI, TWI and others, but for now let's focus on the simplest one, the Serial Communication Protocol, also known as UART. This protocol only uses 2 wires, the transmitter (Tx) and the receiver (Rx) which are connected as shown below:



To send data from one device to another, the developer's job is to queue the data and simply send it through the Tx wire byte by byte. That's all, nothing fancy in this specific case. More information can be found here.

Problem: You are given a data structure containing multiple data types and access to a serial driver API. Your task is to write the body of the `get_sensor_data` function in order to store the retrieved data. This exercise is NOT aimed towards the candidate's algorithmic skills, but rather to their attention to detail and their ability to make use of the tools at their disposal. As a result, this problem does not have any inputs but has an expected output as a way to check if they implemented the function correctly. The candidate should make use of the available files and comments in order to solve this challenge. The files necessary for this challenge can be found inside the *serial* directory.

Output:

```
id: 1
int_data: 41471
short_data: 5119
char data: 8
```

Note:

- You may use any resources to solve this problem.
- Please include any assumptions you have made in the code as comments.

Hint: For this problem, it is extremely important for the candidate to take in consideration the data type sizes in the C programming language.