

Computer Science Team Intro

Henry Gustafson Julian Bauer

The College Preparatory School

Computer Science Team
September 16, 2023

What is computer science team?

Computer science team is a place to

- Compete in ACSL and USACO at any level
- Do fun coding problems
- Discuss computer science concepts
- Learn coding skills

Fun coding problems

- Weekly problems to practice coding
- May relate to ACSL topic or just for fun
- This week: problem xorglop, problem shanülius, problem hurgschetax

Problem Xorglop

Problem Xorglop The Xorglop aliens have many letters in their alphabet but don't know how to join them into words. Create a function that combines *letters*, a list of single character strings, into a single word and outputs that word.

```
def letters_to_word(letters: List[str]) -> str
```

Problem Shanülius

Problem Shanülius The Shanülius aliens have a language very similar to English, except that their alphabet is offset from english by a dialect number. For example, if their dialect number is 2, they will replace 'a' with 'c', 'b' with 'd', and 'z' with 'b'. Create a function that takes the string *sentence* and the dialect number *dialect*, and translates the sentence to English.

```
def translate(sentence: str, dialect: int) -> str
```

Problem Hurgschetax

Problem Hurgschetax The Hurgschetax aliens have a very particular rule for their language: all letters in all words must be in the same order as their alphabet. For example, if the alphabet were 'abcdefghijklmnopqrstuvwxyz', then they would allow the word 'abbd', but not the word 'bad'. Create a function that takes *words*, a list of words, and returns a string representing the minimum possible alphabet to make every word valid.

```
def min_alphabet(words: List[str]) -> str
```

The End

Questions? Comments? Remarks?
Considerations? Confusions?