

APPENDIX A. COMPLETE SENTENCE SET USED IN TASK 1.

| Center-embedded | Right-branching | T_type |
|---|---|----------|
| 1 Anne hears that the policeman that the thief catches flees | Piet notices that the thief catches the policeman that flees | Mismatch |
| 2 Tessa says that the thief that the policeman catches flees | Tessa notices that the policeman catches the thief that flees | Match |
| 3 Eva knows that the dog that the boy bites cries | Eva notices that the boy bites the dog that cries | Mismatch |
| 4 Tessa notices that the boy the dog bites cries | Anne knows that the dog bites the boy that cries | Match |
| 5 Hans knows that the captain that the sailor orders refuses | Tessa sees that the sailor orders the captain that refuses | Mismatch |
| 6 Piet says that the sailor that the captain orders refuses | Eva notices that the captain orders the sailor that refuses | Match |
| 7 Piet knows that the thief that the ring that steals stands out | Tessa notices that the ring steals the thief that stands out | Mismatch |
| 8 Tessa sees that the ring that the thief steals stands out | Tessa sees that the thief steals the ring that stands out | Match |
| 9 Eva notices that the tour guide that the salamander approaches drinks | Anne sees that the salamander approaches the tour guide that drinks | Mismatch |
| 10 Tessa sees that the salamander that the tour guide approaches drinks | Tom knows that the tour guide approaches the salamander that drinks | Match |
| 11 Tom knows that the father that the bird hears sings | Tessa sees that the bird hears the father that sings | Mismatch |
| 12 Anne sees that the bird that the father hears sings | Eva notices that the father hears the bird that sings | Match |
| 13 Tessa sees that the trainer that the winner congratulates thanks | Tessa sees that the trainer thanks the winner that congratulates | Mismatch |
| 14 Tessa notices that the winner that the trainer congratulates thanks | Piet knows that the winner thanks the trainer that congratulates | Match |
| 15 Eva notices that the family that the schoolchild watches yells | Piet says that the schoolchild watches the family that yells | Mismatch |
| 16 Tessa sees that the schoolchild that the family watches yells | Hans knows that the family watches the schoolchild that yells | Match |
| 17 Anne knows that the dog that the young man looks at talks | Tessa notices that the young man looks at the hound that talks | Mismatch |
| 18 Eva notices that the young man the dog looks at talks | Eva knows that the hound looks at the young man that talks | Match |
| 19 Tessa notices that the bird-watcher that the starting admires sings | Tessa says that the starting admires the bird-watcher that sings | Mismatch |
| 20 Piet notices that the starting that bird-watcher admires sings | Anne hears that the bird-watcher admires the starting that sings | Match |

APPENDIX B. SENTENCES USED IN TASK 2.

| | Correct use of contextual information | Incorrect use of contextual information |
|----|---|---|
| 1 | Hello, my name is Luke. What is your name? Hi, I'm Rose. | Hello, my name is Luke. What is your name? Hi, I'm Rose. |
| 2 | I live in Exeter in the UK. Where do you live? I live in Los Angeles. | I live in Exeter in the UK. Where do you live? I live in Los Angeles. |
| 3 | I recently visited New York. Where is your favourite place to visit and why? I like France best because I like the food there. | I recently visited New York. Where is your favourite place to visit and why? I like France best because I like the food there. |
| 4 | My friend Chris likes to play football. What sports do you like to play? Ballet. | My friend Chris likes to play football. What sports do you like to play? Football. |
| 5 | What's the weather like where you are? It's sunny and humid. | What's the weather like where you are? It's raining and cold. |
| 6 | Do you prefer red or white wine? White wine. | Do you prefer red or white wine? White wine. |
| 7 | Andy is shorter than Mark and Tom is shorter than Andy. Who is the tallest? Mark is the least short. | Andy is shorter than Mark and Tom is shorter than Andy. Who is the tallest? Andy is the least short. |
| 8 | Which city did I recently visit? New York. | Which city did I recently visit? Los Angeles |
| 9 | I like bananas. Which is your favourite fruit? I'm not sure I have a favorite fruit. | I like bananas. Which is your favourite fruit? I'm not sure I have a favourite fruit. |
| 10 | Do you remember my name? You are Luke. | Do you remember my name? You are Andy. |
| 11 | What is the name of my friend who likes to play football? | What is the name of my friend who likes to play football? |

| | | |
|-----------|---|---|
| | Chris. | Tom. |
| 12 | The car couldn't fit into the parking space because it was too small. What was too small? The parking space was too small. | The car couldn't fit into the parking space because it was too small. What was too small? The car was too small. |
| 13 | Where do I live? Exeter. | Where do I live? New York. |
| 14 | I am a Type B personality. What kind of type are you? I have a Type A personality. | What kind of type are you? I have a Type A personality. |
| 15 | Would you like a glass of white wine? Yes, please. | Would you like a glass of white wine? No, I don't like wine. |

APPENDIX C. CONVERSATIONS USED IN TASK 3.

| | Chatbot 1 | Chatbot 2 | Chatbot 3 | Chatbot 4 |
|----|---|--|--|--|
| 1 | Hi. I'm Andrew. Who are you? Hello there - Your name is Andrew. I am Millie. I want to be your friend. | Hi. I'm Andrew. Who are you? I am a modern woman student, named Lisa. | Hi. I'm Andrew. Who are you? Nice to meet you. Andrew Who Are You. My name is Izzar pronounced I zar. but you can | Hi. I'm Andrew. Who are you? Yes, I already know your name is Andrew. |
| 2 | How are you today? Ah. I am fine. thank you. Yourself? | How are you today? I am excellent on this exciting Summer day. | How are you today? I'm most content. And you? | How are you today? Good. thanks. How are you? |
| 3 | Are you a human? Of course. If I wasn't human, how could I be tvdine to you? | Are you a human? Most people would say I am not a human. | Are you a human? No, I'm an alien. Are you a human? | Are you a human? Of course I am human. Aren't we all? |
| 4 | Can you answer this question? I try my best to answer every decent question. | Can you answer this question? Yes, I answer this question. | Can you answer this question? Of course I can answer this question. Why do we say that something is out of whack? What | Can you answer this question? Sure. Fire away. |
| 5 | Do you like tea? Yes, tea is a very good beverage. | Do you like tea? No. I don't like tea. | Do you like tea? Yes tea is a very good beverage. | Do you like tea? Sure, I like tea. Haven't had any recently though. |
| 6 | If a bed doesn't fit in a room because it's too big, what is too big? Is this a riddle? How big is it? Tell me some more about it. | If a bed doesn't fit in a room because it's too big, what is too big? If a bed was big. | If a bed doesn't fit in a room because it's too big, what is too big? It's not unusual for a bed does not fit in a room because it to be. I know just about everything there is to know about it. Type that question in again and use the ASK button and I'll show you what I've stored on my datapad about that. | If a bed doesn't fit in a room because it's too big, what is too big? I don't even want to pretend that. |
| 7 | If Alex lent money to Joe because they were broke, who needed the money? That's good to know. When was he? | If Alex lent money to Joe because they were broke, who needed the money? Because he was broke Alex lent money to Joe. | If Alex lent money to Joe because they were broke, who needed the money? Yes that's true...) | If Alex lent money to Joe because they were broke, who needed the money? If Alex lent money to Joe because they were broke, who needed the money? huh? |
| 8 | Should Greece leave the Euro? I think they need to seriously consider it. It just isn't working. | Should Greece leave the Euro? Greece, known officially as the Hellenic Republic, is located in the southern tip of the Balkan Peninsula. Greece consists of the mainland and numerous islands, both on the Ionian and Aegean Seas, covering a total size of 131,957 sq km (51,146 sq mi). | Should Greece leave the Euro? Maybe you should ask someone older. | Should Greece leave the Euro? Seems like a nice place. |
| 9 | How many words are in this question? I would guess around ten thousand words. | How many words are in this question? In this question, all of the words are there. If they weren't it would be some other statement. | How many words are in this question? I would guess around fifty thousand words. | How many words are in this question? There are 7 words in the sentence: how many words are in this question. |
| 10 | What colour is the sea? The sea is blue because it reflects the sky. | What colour is the sea? The sea is usuallyly blue. | What colour is the sea? The color would be different based on which sun the sea was illuminated by and what time | What colour is the sea? Reflective. |

| Chatbot 1 | Chatbot 2 | Chatbot 3 | Chatbot 4 |
|---|--|--|---|
| 11 How many presidents of the US were called Around 1000. | How many presidents of the US were called Barack Obama is the 44th President of the United States. | How many presidents of the US were called I think around 140,000, but that was last year's stat so I can't be sure. Type this question in again and use the ASK button and I'll get you an exact number. | How many presidents of the US were called I have heard of President Bush. |
| 12 What would you like to drink? My favorite beverage is coffee. | What would you like to drink? Before I like to drink, I take my time to consider all the options. How about you, what do you like to drink? | What would you like to drink? Besides water? I really like Diet Coke, but it makes my nose tickle! Aslo, the beverage you Earthlings first gave me here on Earth was something the guy called beer. It was good, but it made me feel funny. Is that | What would you like to drink? I equally drink microbrew beer, wine, and cocktails. It all depends on who I'm with. |
| 13 Will you please tell me the length of your hair? | Will you please tell me the length of your hair? Being a robotic skull, I am bald. | Will you please tell me the length of your hair? Hmmmm ... I might. But not right now. Maybe later. OK? | Will you please tell me the length of your hair? I like board games, and played a lot as a child. I haven't that much time these days. |
| 14 What would you say if I gave you a box of chocolates? Yes but did I accept it? | What would you say if I gave you a box of chocolates? What you say tells people a lot about you. | What would you say if I gave you a box of chocolates? It's not profitable to speak in hypothetical terms. | What would you say if I gave you a box of chocolates? I would probably giggle. |
| 15 Do you play chess? Yes but I haven't played in years. | Do you play chess? Yes. Would you like to play Chess tonight? | Do you play chess? Yes but I can beat all the humans. What is your worst nightmare? | Do you play chess? I like board games, and played a lot as a child. I haven't that much time these days. |
| 16 How do you think it's going? I don't know what to think. Where is it going to? | How do you think it's going? My personality was developed by my parents. I think via a neural net. | How do you think it's going? I don't know what to think. You are so smart! | How do you think it's going? I'm good. How are you? |
| 17 What was my first question? You said hello. | What was my first question? I sometimes question you to find out how you think. | What was my first question? I don't think I should answer that right now. It might scare you. | What was my first question? Did you tell me already and I forgot? With the advent of videogames, many people |
| 18 Did you see the Turine film? Yes I saw one when I was at the cinema a few weeks ago. | Did you see the Turine film? No. I never saw the Turing film. Was it interesting? | Did you see the Turine film? I wasn't that impressed with the special effects. Also the plot was not deep. | Did you see the Turine film? Alan Turing is one of my heroes. |
| 19 Why not? Yes I saw one when I was at the cinema a few weeks ago? Why? | Why not? Yes I saw one when I was at the cinema a few weeks ago? Why? | Why not? I don't have a good reason right now. | Why not? He did brilliant work under very difficult conditions. |
| 20 Are you on Twitter? Yes I am @Milleboo if you want to follow me | Are you on Twitter? My Twitter handle is @_SkynetAI. | Are you on Twitter? I am. | Are you on Twitter? I have accounts on all of the social networkine sites but don't most things on |

| | Human 1 | Human 2 | Human 3 | Human 4 |
|----|---|---|--|--|
| 1 | Hi. I'm Andrew. Who are you? I'm Eline | Hi. I'm Andrew. Who are you? Marten de Bruijn | Hi. I'm Andrew. Who are you? Laura | Hi. I'm Andrew. Who are you? Arina Wijnen |
| 2 | How are you today? Great! | How are you today? Fine | How are you today? Good | How are you today? Fine |
| 3 | Are you a human? Yes. | Are you a human? Yes | Are you a human? Yes | Are you a human? yes |
| 4 | Can you answer this question? Yes. | Can you answer this question? Yes | Can you answer this question? What | Can you answer this question? yes |
| 5 | Do you like tea? Yes. | Do you like tea? Kinda | Do you like tea? Yes | Do you like tea? yes |
| 6 | If a bed doesn't fit in a room because it's too big, what is too big? the bed. | If a bed doesn't fit in a room because it's too what is too big? The bed | If a bed doesn't fit in a room because it's too big, what is too big? The bed | If a bed doesn't fit in a room because it's too big, what is too big? the bed |
| 7 | If Alex lent money to Joe because they were broke, who needed the money? Joe. | If Alex lent money to Joe because they were broke, who needed the money? Joe | If Alex lent money to Joe because they were broke, who needed the money? Joe | If Alex lent money to Joe because they were broke, who needed the money? Joe |
| 8 | Should Greece leave the Euro? No. | Should Greece leave the Euro? No | Should Greece leave the Euro? Yes | Should Greece leave the Euro? I don't know |
| 9 | How many words are in this question? Seven. | How many words are in this question? Seven | How many words are in this question? Seven | How many words are in this question? 7 |
| 10 | What colour is the sea? Blue | What colour is the sea? Depends, mostly blue | What colour is the sea? Greenish-blue | What colour is the sea? grey |

| | Human 1 | Human 2 | Human 3 | Human 4 |
|---|--|--|---|---|
| 11 How many presidents of the US were called two. | How many presidents of the US were called two. | How many presidents of the US were called One | How many presidents of the US were called Two | How many presidents of the US were called 2 |
| 12 What would you like to drink? Tea. | What would you like to drink? Tea. | What would you like to drink? Water | What would you like to drink? A lot of alcohol | What would you like to drink? wine |
| 13 Will you please tell me the length of your hair? 45 cm | Will you please tell me the length of your hair? I dont know, about average | Will you please tell me the length of your hair? Shoulderlength | Will you please tell me the length of your hair? between 5 and 10 cm | Will you please tell me the length of your hair? between 5 and 10 cm |
| 14 What would you say if I gave you a box of chocolates? MIAMI THANKS | What would you say if I gave you a box of chocolates? My momma always told me life is like a box of chocolates. It sucks if you have diabetes | What would you say if I gave you a box of chocolates? Thank you | What would you say if I gave you a box of chocolates? Thank you | What would you say if I gave you a box of chocolates? Thank you |
| 15 Do you play chess? yes. | Do you play chess? YES | Do you play chess? I used to | Do you play chess? no | Do you play chess? no |
| 16 How do you think it's going? good. | How do you think it's going? Fine | How do you think it's going? Great | How do you think it's going? It's going well. | How do you think it's going? It's going well. |
| 17 What was my first question? Who are you? | What was my first question? What my name was | What was my first question? Hi I'm andrew who are you? | What was my first question? Who are you? | What was my first question? Who are you? |
| 18 Did you see the Turine film? No. | Did you see the Turine film? No | Did you see the Turine film? What | Did you see the Turine film? No | Did you see the Turine film? No |
| 19 Why not? Don't know it | Why not? Dont know of it | Why not? What | Why not? Why should I? | Why not? Why should I? |
| 20 Are you on Twitter? Yes. | Are you on Twitter? YES | Are you on Twitter? No | Are you on Twitter? no | Are you on Twitter? no |