Communication Networks

Spring 2020

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Two important pillars of today's Internet

Internet-wide routing

Covered in the first project

Reliable transport

Main focus of the second project

Implement your own Reliable Transport Protocol

recover from packet loss
and reordering

Implement your own Reliable Transport Protocol

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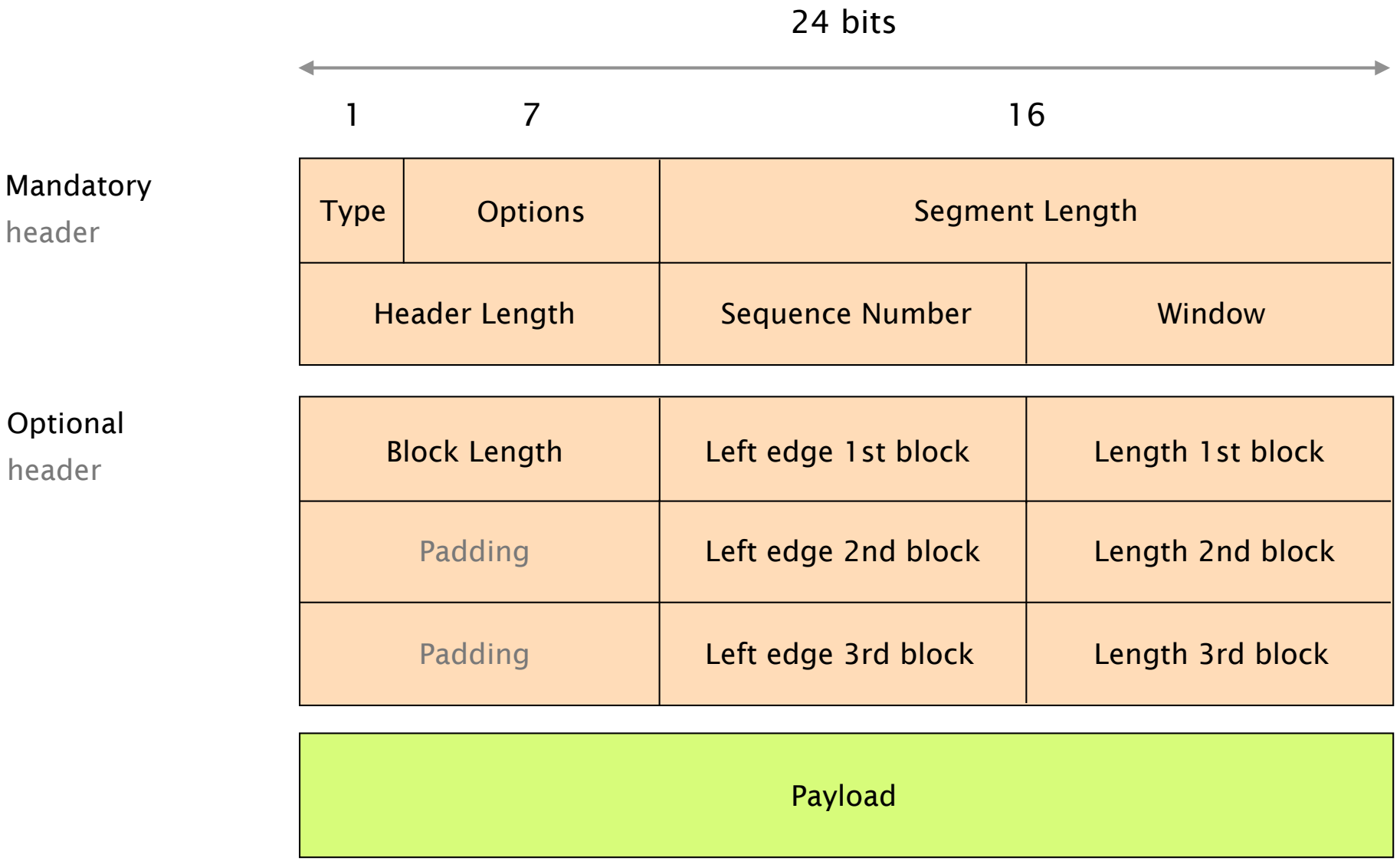
and reordering

Part 1	Complete a simple Go-Back-N implementation Retransmit all packets after a timeout
Part 2	Add support for Selective Repeat Fast retransmission after duplicated ACKs
Part 3	Add support for Selective Acknowledgements (SACK) SACK contains blocks of correctly received segments
Bonus	Implement your own congestion control algorithm

We use a custom header for the GBN protocol



The assignment text online contains detailed instructions

This project counts as **10%** to your final grade

Every group member receives the same grade

You will once again write a report

Max 10 pages but should be much shorter

Most of the tasks also include a theoretical question

Answer them in the report

A new VM waits for you

All the scrips are already on your VM

Use scp or git (**private** GitLab repo) to transfer files

You keep your group number from the first project

Important: VM port number is **3000** + group number

Use the password received via email this morning

Let’s see how the final sender
and receiver should look like

There are multiple options to test your implementation

Run your sender against your receiver

Should be your main focus

Test with the implementation of another group

Good way to find out if you follow all the specifications

Optionally, use our test framework

Passing all the tests does not guarantee a 6

If you have questions

Ask on Slack or send us an email

Please use the **#transport_project** channel

We will announce additional online Q&A sessions

During the sessions we also offer voice/video chats

Final comments

Deadline: May 22 2020, at midnight

Submit your code and report via email

Read the assignment text carefully

Make sure you follow all the specifications

Do not copy code from other groups

We will check your code with automated tools